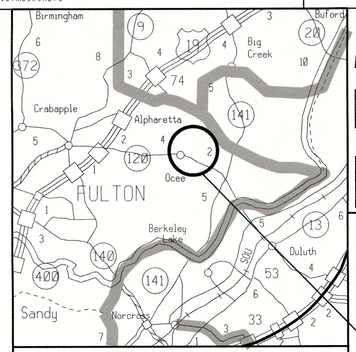
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	1	241

CITY OF JOHNS CREEK
PUBLIC WORKS

PLAN AND PROFILE OF PROPOSED
SR 120 / ABBOTTS BRIDGE ROAD OPERATIONAL IMPROVEMENTS
FROM JONES BRIDGE ROAD TO PARSONS ROAD(WEST)
CSHPP-0007-00(310), CITY OF JOHNS CREEK, FULTON COUNTY



LOCATION SKETCH

PROJECT CSHPP-0007-00(310)
ABBOTTS BRIDGE ROAD

FEDERAL AID PROJECT

GEORGIA D.O.T. P.I. No. 0007310
FEDERAL ROUTE No. N/A
STATE ROUTE No. 120

NOTE :
ALL REFERENCES IN THIS DOCUMENT,WHICH INCLUDES ALL PAPERS,WRITINGS, DOCUMENTS,DRAWINGS,OR PHOTOGRAPHS USED,OR TO BE USED IN CONNECTION WITH THIS DOCUMENT,TO "STATE HIGHWAY DEPARTMENT OF GEORGIA","STATE HIGHWAY DEPARTMENT ",GEORGIA STATE HIGHWAY DEPARTMENT "," HIGHWAY DEPARTMENT ",OR " DEPARTMENT "WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA,AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.

DESIGN DATA:
TRAFFIC A.D.T.: SR 120 22,600 (2017)
TRAFFIC A.D.T.: SR 120 24,800 (2037)
TRAFFIC D.H.V.: 2,005
DIRECTIONAL DIST: 56%
% TRUCKS: 2.5%
24 HR.TRUCKS %: 4.6%
SPEED DESIGN: 45 MPH

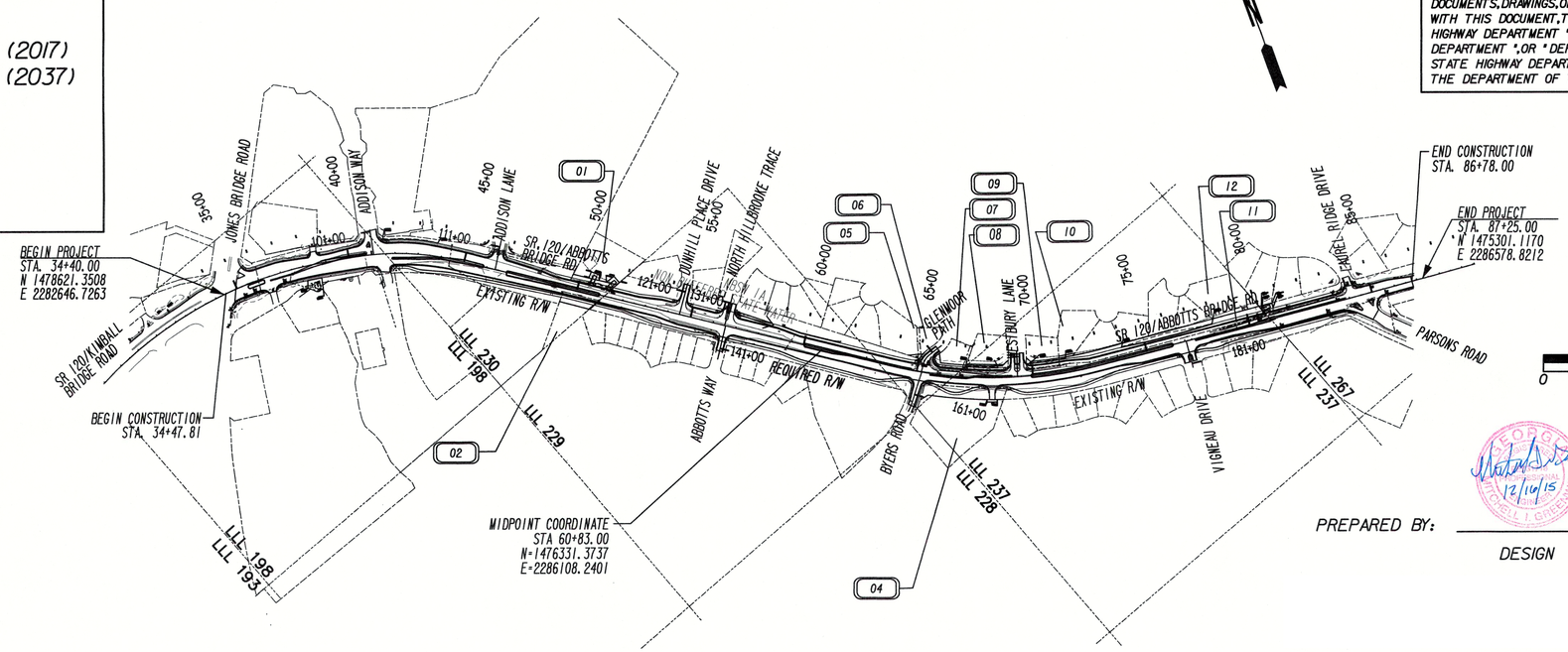
LOCATION & DESIGN
APPROVAL DATE: MAY 30,2012

FUNCTIONAL CLASS:
URBAN MINOR ARTERIAL

THIS PROJECT IS 100% IN FULTON COUNTY AND IS 100% IN CONG.DIST.NO.6.

PROJECT DESIGNATION: EXEMPT
DESIGNED IN ENGLISH UNITS.

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983)/94 WEST ZONE,AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.



SCALE IN FEET
0 300 600 1200

PREPARED BY: _____
DESIGN

PLANS PREPARED BY
STANTEC
UNDER THE SUPERVISION OF
MITCHELL GREENWAY, P.E.

THE DATA,TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY INDICATED THEREBY,WHETHER BY DRAWINGS OR NOTES,OR IN ANY OTHER MANNER,ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER,THE SAME ARE SHOWN AS INFORMATION ONLY,ARE NOT GUARANTEED,AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY.THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04,102.05,AND 104.03 OF THE SPECIFICATIONS.

LENGTH OF PROJECT	COUNTY No. 121 Project No. CSHPP-0007-00(310)
	MILES
NET LENGTH OF ROADWAY	0.991
NET LENGTH OF BRIDGES	0.000
NET LENGTH OF PROJECT	1.001
NET LENGTH OF EXCEPTIONS	0.000
GROSS LENGTH OF PROJECT	1.001

Stantec
Stantec Consulting Services
6055 Lakeside Commons Drive
Suite 100
Macon, Georgia U.S.A. 31210-5790
Tel. (478) 474-6100
Fax. (478) 474-8933
www.stantec.com

PLANS COMPLETED 12-16-2015	
PLANS COMPLETED FOR PFPR: 09-26-2013	
PLANS COMPLETED FOR FFPR 09-10-2014	
REVISIONS	

DRAWING No. 01-001

CSHPP-0007-00(310),FULTON COUNTY

SHEET NO.	DWG NO.	DESCRIPTION
1	01-001	Cover
2	02-001	Index
3	03-001	Revision Summary
4 - 5	04-001 - 04-002	General Notes and Environmental Resources Impact Table
6 - 9	05-001 - 05-004	Typical Sections
10 - 19	06-001 - 06-010	Summary of Quantities
20	07-001	Quantities by Amendment
21	08-001	Quantities on Construction
22 - 25	10-001 - 10-004	Traffic Diagram
26 - 29	11-001 - 11-004	Construction Layout
30 - 39	13-001 - 13-010	Mainline Plans
40 - 44	15-001 - 15-005	Mainline Profile
45 - 50	16-001 - 16-006	Crossroad Profile
51	17-001	Driveway Profile
52	19-001	Construction Staging Notes
53	21-001	Drainage Area Map
54 - 60	22-001 - 22-007	Drainage Profiles
61 - 89	23-001 - 23-029	Earthwork Cross Sections
90 - 100	24-000 - 24-010	Utility Plans
101 - 111	26-001 - 26-011	Signing and Marking Plans
112 - 117	27-001 - 27-006	Signal Plans
118 - 121	28-001 - 28-004	ATMS Plans
122 - 122A	31-001 - 31-002	Retaining Wall Envelopes
123	32-001	Retaining Wall Plans
		CONSTRUCTION DETAILS
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125	A-2	Concrete Valley Gutter at Street Intersection C (07/2011)
126	A-3	Concrete Sidewalk Details Curb Cut (Wheelchair) Ramps (06/2009)
127	A-4	Detectable Warning Surface Truncated Dome Size,Spacing and Alignment. Requirements (06/2009)
128	P-7	Pavement Edge Treatment Asphalt and Concrete Pavement (11/2011)
129	PW-1	Parapet Retaining Wall, Type P1, P2 and P3 (07/2004)
130	T01	Sign Plates (01/2000)
131	T02	Details For Typical Framing (03/2000)
132	T03A	Type 7,8 and 9 Square Tube Post Installation Detail (07/2002)
133	T04	Details of Cardinal Direction Signs (01/2000)
134	T05A	Details of Regulatory Signs (Sheet 1 of 2) (01/2003)
135	T05B	Details of Regulatory Signs (Sheet 2 of 2) (01/2000)
136	T05C	Details of Warning Signs (01/2000)
137	T11A	Details of Pavement Marking Placement on Non-Limited Access Roadway (01/2000)
138	T12A	Details of Pavement Marking Arrow Location (01/2000)
139	T12B	Details of Pavement Markings - Arrows (04/2000)
140	T13A	Details of Pavement Marking Words (Sheet 1 of 2) (01/2000)
141	T14	Details of Pavement Marking Hatching (11/2008)
142	T15A	Details of Raised Pavement Marker Location on Non-Limited Access Roadway (01/2004)
143	T15C	Details of Raised Pavement Markers (09/2011)
144	T16	Details of Bicycle Lane Pavement Markings (01/2000)
145	TS01	Inductive-Loop Detector Installation (04/2010)
146	TS02	Pullbox Assembly and Installation (04/2010)
147	TS03	Cabinet Base Detail (04/2010)
148	TS03A	Pedestrian Facilities Installation Details (04/2010)
149	TS08	Utility Clearance Detail (04/2010)
150	TS09	Standard Guying Detail (04/2010)
151	TS10	Fiber Optics Details 1 of 2 (02/2012)
152	TS11	Fiber Optics Details 2 of 2 (02/2012)

SHEET NO.	DWG NO.	DESCRIPTION
		GEORGIA STANDARDS
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154	1011A	Brick Manholes (10/1981)
155	1019B	Drop Inlets Types V-1 and V-2 (08/1999)
156	1030D	Concrete and Metal Pipe Culverts Sheet 1 of 3 (09/2001)
157	1030D	Concrete and Metal Pipe Culverts Sheet 2 of 3 (09/2001)
158	1030D	Concrete and Metal Pipe Culverts Sheet 3 of 3 (09/2001)
159	1033D	Catch Basins (for use with 6" or 8" Ht. curb and gutter) (08/1982)
160	1033D	Precast Catch Basins (for use with 6" or 8" precast Ht. curb and gutter) (09/1982)
161	1033F	Catch Basins (for use with header or integral curbs,4",6",8"or10" Ht.) (08/1982)
162	1033F	Precast Catch Basins (for use with header or precast integral curbs,4",6",8"or10" Ht.) (09/1982)
163	1034D	Catch Basins (for use with 6" or 8" curb and gutter in sags or low points) (08/1982)
164	1034D	Precast Catch Basins (for use with 6"or8" curb and precast gutter in sags or low points)(09/1982)
165	1120	Flared End Section for Pipes (06/2006)
166	1125	Inlet Headwall - Outlet Headwall (10/1999)
167	4000W	Guardrail Warrant Guides (09/2007)
168	4380	"W" Beam Guardrail 31 Inch Guardrail Height (08/2011)
169	4381	Posts and Offset Blocks for "W" & "T" Beam Guardrail 31 Inch Guardrail Height (08/2011)
170	4382	Guardrail Anchorage Type 1 31 Inch Guardrail Height (08/2011)
171	4384	Type 12 31 Inch Guardrail Height (08/2011)
172	9003	Federal Aid and State Project Markers; Right of Way Markers; County Line Marker (04/2006)
173	9031L	Retainning Wall Typical Sections, Raising Headwall, And Typical Pipe Plug (06/1998)
174	9031R	Placing Roof Drain Pipe Under Sidewalk - Ramp Type Barricade - Pipe Handrail for Retaining Wall Pipe Handrail
		for Concrete Steps (10/1988)
175	9031S	Median Drop Inlet (Precast or Built-in-Place) and Concrete Apron (04/1996)
176	9032B	Concrete Curb and Gutter, Concrete Curbs, Concrete Medians (11/2011)
177	9100	Traffic Control General Notes, Standard Legend, and Miscellaneous Details (03/2006)
178	9102	Traffic Control Detail for Lane Closure on Two-Lane Highway (03/2006)
178A - 178Q	44-001 - 44-017	Water Relocation Plans
		EROSION SEDIMENTATION AND POLLUTION CONTROL PLAN
179	50-001	ESPC Cover
180 - 182	51-001 - 51-003	ESPC General Notes
183 - 188	52-001 - 52-006	ESPC Legend and Uniform Codes
189	53-001	ESPC Drainage Map
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200 - 209	54-010 - 54-018	BMP Location Details Phase 2
210 - 219	54-019 - 54-027	BMP Location Details Phase 3
220	55-001	Watershed Map and Site Monitoring Plan
		EROSION CONTROL CONSTRUCTION DETAILS
221	D-24A	Temporary Silt Fence (Sheet 1 of 4) (01/2011)
222	D-24B	Temporary Silt Fence Berm Ditch, Installation, Brush Barrier (Sheet 2 of 4) (01/2011)
223	D-24C	Temporary Silt Fence J-Hooks, Inlet Sediment Traps (Sheet 3 of 4) (01/2011)
224	D-24D	Temporary Silt Fence Fabric Check Dam (Sheet 4 of 4) (01/2011)
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		RIGHT OF WAY PLAN
228	1	RW Cover
229	2	RW Revisions
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Johns Creek

Stantec

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

INDEX

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
2-001

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	3	241

DATE	SHEET NO.	REVISION

DATE	SHEET NO.	REVISION

Johns Creek

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REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

REVISION SUMMARY

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
3-001

3/1/2007 GPLN

GENERAL NOTES:

1. A NOTICE OF INTENT (NOI) IS REQUIRED FOR THIS PROJECT.

2. THE FOLLOWING UTILITY OWNERS MAY HAVE FACILITIES WHICH CONFLICT WITH CONSTRUCTION ON THIS PROJECT:

TYPE OF UTILITY	UTILITY OWNER
GAS	ATLANTA GAS LIGHT COMPANY
SANITARY/WATER	FULTON COUNTY PUBLIC WORKS
ELECTRIC	GA POWER COMPANY
ELECTRIC	SAWNEE EMC
TELEPHONE	AT&T
TELEPHONE	VERIZON
CABLE	COMCAST CABLE
OTHER	CITY OF JOHNS CREEK

GEORGIA811 Utilities Protection Center, Inc
Know what's below. Call before you dig.

3. THERE IS NO SUITABLE PLACE TO BURY EXISTING CONSTRUCTION DEBRIS WITHIN THE PROJECT'S LIMITS. THE CONTRACTOR SHALL PROVIDE AN ENVIRONMENTALLY APPROVED SITE TO DISPOSE OF EXISTING CONSTRUCTION DEBRIS AT NO ADDITIONAL COST TO THE DEPARTMENT.

4. ALL DRIVEWAYS WILL BE PAVED TO THE RIGHT OF WAY LINE OR THEIR TIE IN POINT WHICH EVER IS FURTHER. (DIRT DRIVEWAYS ONLY). ALL DRIVEWAYS THAT ARE TO BE RECONSTRUCTED SHALL BE REPLACED IN KIND. I.E. ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND ASPHALT FOR EARTH. RESIDENTIAL DRIVES SHALL BE 14 FEET WIDE AT THE THROAT UNLESS NOTED OTHERWISE IN THE PLANS. COMMERCIAL DRIVES SHALL BE 24 FEET WIDE UNLESS NOTED OTHERWISE IN THE PLANS. THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO MAKING ANY REVISIONS SUCH AS TO LOCATION, WIDTH AND/OR NUMBER OF DRIVES TO BE CONSTRUCTED. WHERE REQUIRED THE DRIVES SHALL BE PAVED AS FOLLOWS:

ASPHALTIC DRIVES- RESIDENTIAL (MINIMUM WIDTH OF 14 FT.):
RECYL ASPH CONC 12.5 MM SP,GP 2 ONLY,INCL BITUM MATL & H LIME, 1.5" (165 LBS/SY)
6" GRADED AGGREGATE BASE

ASPHALTIC DRIVES- COMMERCIAL:
RECYL ASPH CONC 12.5 MM SP,GP 2 ONLY,INCL BITUM MATL & H LIME, 1.5" (165 LBS/SY)
RECYL ASPH CONC 19 MM SP,GP 1 OR 2,INCL BITUM MATL & H LIME, 2" (220 LBS/SY)
6" GRADED AGGREGATE BASE

CONCRETE DRIVES - RESIDENTIAL — 6" DRIVEWAY CONCRETE
CONCRETE DRIVES - COMMERCIAL — 8" DRIVEWAY CONCRETE

5. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR THE GEORGIA DEPARTMENT OF TRANSPORTATION, CURRENT EDITION. ANY CONFLICTS ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVES FOR CLARIFICATION BEFORE PROCEEDING.

6. THE CONTRACTOR SHALL USE GEOTEXTILE FABRIC TO REDUCE EROSION ON ALL SLOPES GREATER(STEEPER) THAN 3:1. MATERIALS AND LABOR SHALL BE PAID FOR AS SLOPE MATTING.

7. THE PROJECT INCLUDING ALL HANDICAP RAMPS IS TO MEET THE ADA AND GDOT STANDARDS. SEE SPECIAL DETAIL CONCRETE SIDEWALK DETAILS CURB CUT (WHEELCHAIR RAMPS) ON SHEET A3. ALL WHEELCHAIR RAMPS SHALL BE 8" CONCRETE WITHIN THE RADIUS.

8. UTILITY NOTES:
   - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS OPERATIONS WITH ALL UTILITIES WHICH MAY BE EXISTING AND BE IN CONFLICT WITH HIS WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT LOCATION, DEPTH AND EXISTENCE OF ALL UTILITIES BEFORE STARTING ANY CONSTRUCTION.
   - CONTRACTOR SHALL NOTIFY THE UTILITY PROTECTION CENTER AT LEAST 72 HOURS BEFORE THE START OF ANY NEW CONSTRUCTION. CALL BEFORE YOU DIG (811)

9. ALL ORANGE BARRIER FENCE AND PHASE 1 EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO GRADING.

10. ALL EXISTING LANDSCAPES STRIPS OUTSIDE THE CONSTRUCTION LIMITS SHALL NOT BE DISTURBED.

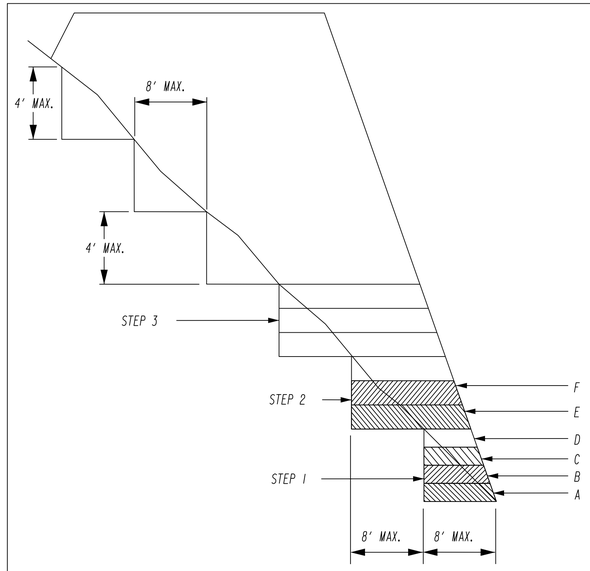
11. THE CONTRACTOR SHALL ENSURE THAT POSITIVE AND ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE, BUT WILL NOT BE LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED OR REMOVED OR REGRADED AS REQUIRED BY THE ENGINEER, EXCEPT FOR THOSE DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS IN THE PLANS AND HAVING SPECIFIC PAY ITEMS IN THE DETAILED ESTIMATE. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.

12. MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.

13. ALL EXISTING DRAINAGE PIPES AND STRUCTURES WITHIN THE PROPOSED CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED.

ENVIRONMENTAL RESOURCE IMPACT TABLE

Resource Name/Type	Location Beginning STA	Location Ending STA	Side	Construction Activity	Permitted Activity	Controlling Criteria	Special Provision?	Comments including any permit expiration dates
Non-buffered State Water 1A	58+95	60+28	LT	None	None	NPDES	-	



BENCHING DETAIL

Revised 9/29/08 4.5.28 NO SCALE

BENCHING NOTES:

1. WHERE THE EMBANKMENT IS TO BE PLACED ON A HILLSIDE OR ANOTHER EXISTING EMBANKMENT HAVING A SLOPE OF 3 TO 1 OR STEEPER. THE FOUNDATION MUST BE BENCHED WHILE THE EMBANKMENT IS BEING MADE. (SEE DIAGRAM AT LEFT.)

2. THE DIAGRAM SHOWS THAT BEFORE LAYER "A" IS PLACED THE FIRST STEP IS TO (1) CUT INTO THE SLOPE A MAXIMUM DISTANCE OF ABOUT 8 FEET (ABOUT¾ THE WIDTH OF THE TYPICAL D-8 BULDOZER BLADE). SUCCESSIVE LAYERS B, C, AND D ARE THEN PLACED BEFORE LAYER "E" IS PLACED. THE SECOND STEP IS CUT 8 FEET INTO THE SLOPE AND SUCCESSIVE LAYERS ARE AGAIN PLACED. IF IT IS ANTICIPATED THAT THE VERTICAL PART OF THE STEP WILL EXCEED 4 FEET IF A 8 FEET HORIZONTAL CUT IS MADE, THEN THE ACTUAL CUT STOPS WHEN THE VERTICAL PART REACHES A MAXIMUM OF 4 FEET ALLOWING THE HORIZONTAL DISTANCE TO VARY.

3. THE PROCESS OF BENCHING IS CONSIDERED INCIDENTAL TO THE ITEM OF UNCLASSIFIED EXCAVATION AND BORROW OR GRADING COMPLETE IN CONSTRUCTION OF THE EMBANKMENT AND NO ADDITIONAL MEASUREMENT OF QUANTITY OR PAYMENT WILL BE MADE FOR BENCHING.

Johns Creek

Stantec

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

GENERAL NOTES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 4-001

TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARING A TRAFFIC CONTROL PLAN SHOWING THE PROPOSED MEASURES TO MANAGE TRAFFIC DURING CONSTRUCTION ACTIVITIES ON STATE ROUTES. THE PLAN SHALL CONFORM TO THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND GEORGIA DOT SPECIFICATION 150. ANY LANE CLOSURES ON STATE ROUTES MUST BE APPROVED BY AND COORDINATED WITH THE GEORGIA DOT AREA ENGINEER 2 WEEKS PRIOR TO LANE CLOSURES. LOCAL ROADS ARE TO BE COORDINATED WITH THE CITY OF JOHNS CREEK. LANE CLOSURES WILL REQUIRE PROPER LANE TAPERS AND ADVANCE WARNINGS PER GEORGIA DOT STANDARDS.

2. EXISTING TRAFFIC SIGNALS SHALL REMAIN OPERABLE AT ALL TIMES. CONTACT TOM UDELL, CITY OF JOHNS CREEK SIGNAL ENGINEER AT 678-512-3200 PRIOR TO BEGINNING WORK TO DISCUSS BURIED SIGNAL EQUIPMENT.

3. ALL SIGNING, MARKING, AND TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

STANDARD SIGNS GENERAL NOTES:

1. ALL STANDARD HIGHWAY SIGNS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND THE GEORGIA SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND/OR SPECIAL PROVISIONS.

2. SIGN ERECTION STATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS WHERE NECESSARY, BUT SHALL BE WITHIN THE LIMITATIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. NO SIGN LOCATION SHALL BE CHANGED BY THE CONTRACTOR OR BY THE PROJECT ENGINEER WITHOUT PRIOR APPROVAL FROM THE OFFICE OF TRAFFIC SAFETY AND DESIGN.

3. ALL STANDARD HIGHWAY SIGNS SHALL BE ERECTED AT A HEIGHT OF 7 FEET ABOVE THE NORMAL EDGE OF PAVEMENT TO THE BOTTOM OF THE SIGN OR ASSEMBLY.

4a. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON INTERSTATE HIGHWAYS SHALL BE 32 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), UNLESS SPECIFIED OTHERWISE IN THE PLANS. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON RAMPS SHALL BE 2 FEET FROM THE NORMAL EDGE OF PAVED SHOULDER, OR EDGE OF GRADED SHOULDER WHEN PRESENT.

4b. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON ALL OTHER ROADWAYS SHALL BE 6 FEET FROM THE EDGE OF THE PAVED SHOULDER OR 12 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), WHICHEVER IS GREATER. THE HORIZONTAL CLEARANCE IN NON-MOUNTABLE CURB SECTIONS SHALL BE AT LEAST 2 FEET FROM THE CURB FACE TO THE NEARER EDGE OF THE SIGN(S).

4C. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS MOUNTED BEHIND GUARD RAIL SHALL BE 6 FEET FROM THE FACE OF THE GUARD RAIL TO THE NEARER EDGE OF THE SIGN(S).

5. SINGLE PLATE, HORIZONTAL RECTANGULAR SIGNS OVER 48 INCHES IN WIDTH SHALL BE MOUNTED ON TWO POSTS WITH 2 EACH 2 INCH x ½ INCH x (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAPS. THE STRAPS SHALL BE FLUSHED WITH THE BACK OF THE SIGN, WITH ONE EACH ACROSS THE TOP AND BOTTOM OF THE SIGN. THE CENTERLINE OF EACH POST SHALL BE INSET 1/6TH OF THE SIGN WIDTH FROM THE EDGE OF THE SIGN. SIGN PLATE BOLT HOLES SHALL BE ⅝ INCH DIAMETER; DRILLED OR PUNCHED, AS SHOWN ON THE SIGN PLATE DETAILS.

6. EACH 42 OR 48 INCH WIDE x 18 OR 24 INCH HIGH SIGN REQUIRES ONE 2 INCH x ½ INCH x (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAP LOCATED IN THE CENTER OF THE SIGN AND FLUSHED WITH THE BACK OF THE SIGN.

7. SIGN ASSEMBLIES SHALL BE MOUNTED ON ALUMINUM OR GALVANIZED STEEL STRAP FRAMES. FOR DETAILS AND STRAP SPECIFICATIONS, REFER TO SIGN ASSEMBLY-TYPICAL FRAMING DETAILS.

8. TYPE 9 (HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL STANDARD HIGHWAY SIGNS REQUIRING REFLECTORIZED BACKGROUNDS EXCEPT AS SPECIFIED BELOW OR SPECIFIED OTHERWISE IN THE PLANS. EITHER CLASS 1 OR CLASS 2 ADHESIVE BACKING IS PERMISSIBLE.

9. TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL RED SERIES SIGNS (R1-1, R1-2, R1-3A, R1-4A, R5-1, R5-1A).

10. TYPE 9 (VERY HIGH INTENSITY) FLUORESCENT YELLOW GREEN REFLECTIVE SHEETING SHALL BE USED FOR SCHOOL ZONE (S1-1, S2-1, S3-1, S4-3, AND THE TOP PORTION OF THE S5-1) SIGNS, BICYCLE CROSSING (W11-1) SIGNS, AND PEDESTRIAN CROSSING (W11-2 AND W11A-2) SIGNS. SIGNS WITHIN THE SAME ASSEMBLY AS THE SCHOOL ZONE SIGNS SPECIFICALLY LISTED ABOVE AND ALL REGULATORY SIGNS PLACED AS PART OF THE SCHOOL ZONE SIGNING SHALL HAVE TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING BACKGROUNDS OF THE APPROPRIATE COLOR.

11. TYPE 9 (VERY HIGH INTENSITY) FLUORESCENT YELLOW REFLECTIVE SHEETING SHALL BE USED FOR ALL WARNING SIGNS.

12. A 1/2 INCH MINIMUM AIR SPACE SHALL BE REQUIRED BETWEEN ALL SIGN PLATES WITHIN AN ASSEMBLY.

13. WHERE SIGNS WITHIN AN ASSEMBLY EXTEND BELOW THE STANDARD MOUNTING HOLES ON THE POST(S), ADDITIONAL ⅝ INCH DIAMETER HOLE(S), DRILLED OR PUNCHED, SHALL BE REQUIRED TO PROPERLY MOUNT THE ASSEMBLY.

14. INTERSTATE SHIELDS SHALL CONTAIN THE WORD GEORGIA. ALL INTERSTATE, U.S., AND GEORGIA SHIELDS REQUIRING ALT, BUS, CONN, LOOP, OR SPUR SHALL USE 4 INCH SERIES "D" LETTERS. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, FOR DETAILS.

15. FOR DETAILS OF SPECIAL DESIGN HIGHWAY SIGNS, SEE DETAILS OF MISCELLANEOUS SIGNS.

16. REFER TO PLAN SHEETS FOR LOCATION OF THE DISTRICT ENGINEERS' OFFICE TO BE SHOWN ON ALL R552-1 (LIMITED ACCESS) SIGNS IN THIS PROJECT, IF ANY.

17. THE CONTRACTOR WILL, AS REQUESTED BY THE DISTRICT TRAFFIC OPERATIONS ENGINEER, BE REQUIRED TO REMOVE ANY EXISTING SIGNS THAT ARE DUPLICATED OR ARE CONTRARY TO THESE SIGN PLANS.

PIPE CULVERT MATERIAL ALTERNATES
FOR PIEDMONT/BLUE RIDGE REGION

pH: 6.01
Resistivity: 10000

TYPE OF PIPE INSTALLATION				CONCRETE	CORRUGATED STEEL AASHTO M-36		CORRUGATED ALUMINUM AASHTO M-196	PLASTIC			
					ALUMINUM COATED (TYPE 2) CORR. STEEL	PLAIN ZINC COATED	PLAIN UNCOATED ALUMINUM	CORR. POLY-ETHYLENE AASHTO M-252	CORR. POLY-ETHYLENE SMOOTHED LINED AASHTO M-294 TYPE "S"	POLY VINYL CHLORIDE (PVC) PROFILE WALL AASHTO M-304	POLY VINYL CHLORIDE (PVC) CORRUGATED SMOOTH INTERIOR ASTM F-949
STORM DRAIN	LONGITUDINAL INTERSTATE AND TRAVEL BEARING			X							
STORM DRAIN	LONGITUDINAL NON-INTERSTATE AND NON-TRAVEL BEARING			X	X		X		X	X	X
STORM DRAIN	CROSS DRAIN	GRADE ≤ 10%	ADT < 250	X	X	X	X		X	X	X
STORM DRAIN	CROSS DRAIN	GRADE ≤ 10%	250 < ADT < 1,500	X	X*		X		X	X	X
STORM DRAIN	CROSS DRAIN	GRADE ≤ 10%	1,500 < ADT > 15,000	X					X	X	X
STORM DRAIN	CROSS DRAIN	GRADE ≤ 10%	ADT > 1,500	X							
STORM DRAIN	CROSS DRAIN	GRADE > 10%	ADT < 250		X	X	X		X	X	X
STORM DRAIN	CROSS DRAIN	GRADE > 10%	ADT > 250				X		X	X	X
SIDE DRAIN				X	X	X	X		X	X	X
PERMANENT SLOPE DRAIN					X	X	X		X	X	X
PERFORATED UNDERDRAIN					X	X	X	X	X		X

* THIS TYPE PIPE CAN BE USED IF THE ADDITION OF TYPE "B" COATING (AASHTO M-190, HALF BITUMINOUS COATED WITH PAVED INVERT) IS UTILIZED.

NOTE:

1. ALLOWABLE MATERIALS ARE INDICATED BY AN "X".
2. STRUCTURAL REQUIREMENTS OF STORM DRAIN PIPE WILL BE IN ACCORDANCE WITH GEORGIA STANDARD 1030-D OR 1030-P, WHICHEVER IS APPLICABLE, AND THE STANDARD SPECIFICATIONS.
3. GRADED AGGREGATE BACKFILL SHALL BE USED IN CROSS DRAIN APPLICATIONS FOR ALL PLASTIC PIPES (AASHTO M-294, HDPE PIPE; AASHTO M-304, PVC PIPE; ASTM F-949, PVC PIPE).
4. THE CONTRACTOR SHALL PROVIDE ADDITIONAL STORM SEWER CAPACITY CALCULATIONS IF A PIPE MATERIAL OTHER THAN CONCRETE IS SELECTED.
5. PIPE USED UNDER MECHANICALLY STABILIZED EARTH (MSE) WALLS, WITHIN MSE WALL BACKFILL, OR WITHIN FIVE FEET OF AN MSE WALL FACE SHALL BE CLASS V CONCRETE PIPE.
6. PROJECT SPECIFIC PH AND RESISTIVITY VALUES ARE ENTERED INTO THE RESPECTIVE BOXES ABOVE TO DETERMINE ALLOWABLE PIPE MATERIALS.

REV. 03-22-10

Johns Creek

Stantec

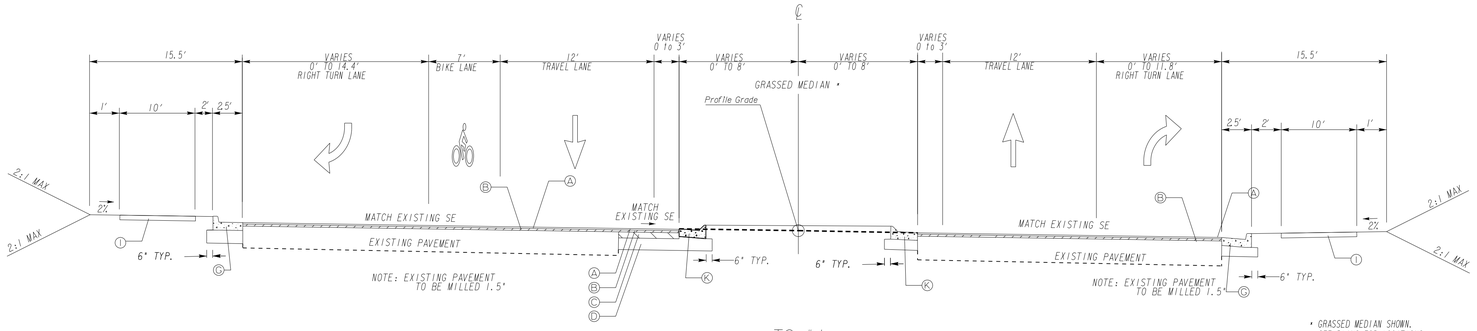
REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

GENERAL NOTES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

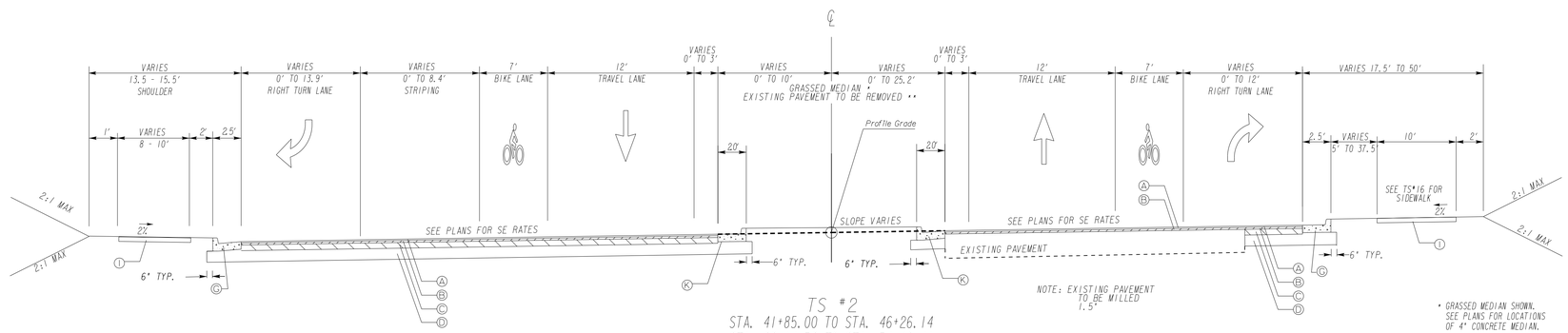
DRAWING No. 4-002



TS #1
STA. 34+94.44 TO STA. 41+85.00
*** STA. 84+00.00 TO STA. 86+78.00
S.R. 120 / ABBOTT'S BRIDGE ROAD

* GRASSED MEDIAN SHOWN. SEE PLANS FOR LOCATIONS OF 4" CONCRETE MEDIAN.

***2" 19mm OVERLAY NOT REQUIRED ADDITIONAL PAVEMENT OVERLAY TO BE COMPLETED WITH FUTURE GDOT PROJECT P# 0012788.



TS #2
STA. 41+85.00 TO STA. 46+26.14
STA. 62+14.78 TO STA. 74+46.41
STA. 82+54.00 TO STA 84+00.00
S.R. 120 / ABBOTT'S BRIDGE ROAD

* GRASSED MEDIAN SHOWN. SEE PLANS FOR LOCATIONS OF 4" CONCRETE MEDIAN.

** REMOVAL OF EXISTING PAVEMENT TO BE INCLUDED IN PRICE FOR GRADING COMPLETE.

NOTES:

1. LOCATION OF EXISTING PAVEMENT VARIES WITH RESPECT TO THE PROPOSED CENTERLINE.
2. FOR SUPERELEVATION RATE AND LOCATIONS, SEE ROADWAY PLANS
3. CURB & GUTTER ON HIGH SIDE OF SUPERELEVATION TO SLOPE SAME AS PAVEMENT.
4. GRASS PLOT BETWEEN CURB AND GUTTER AND SIDEWALK TO BE SOD.
5. CURB & GUTTER SHOWN ADJACENT IN MEDIAN LOCATIONS. SEE PLANS FOR LOCATIONS OF CONCRETE INTEGRAL MEDIAN.
6. SEE GEORGIA STANDARD 9032B FOR DOWELED MEDIAN DETAIL.

REQUIRED PAVEMENT

- (A) RECYL ASPH CONC 12.5 MM SP, GP 2 ONLY, INCL BITUM MATL & H LIME, 1.5" (165 LBS/SY)
- (B) RECYL ASPH CONC 19 MM SP, GP 1 OR 2, INCL BITUM MATL & H LIME, 2" (220 LBS/SY)
- (C) RECYL ASPH CONC 25 MM SP, GP 1 OR 2, INCL BITUM MATL & H LIME, 6" (660 LBS/SY)
- (D) 12" GRADED AGGREGATE BASE
- (E) RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME, (AS REQUIRED BY ENGINEER)
- (F) CONC MEDIAN, 4" THICK
- (G) CONC CURB & GUTTER, 8"X30" TP 2
- (I) CONC SIDEWALK, 4" (8'-10' ENHANCED SIDEWALK)
- (J) CONC HEADER CURB, 6" TP 7
- (K) CONC CURB & GUTTER, 6"X24" TP 7

Johns Creek

Stantec

NOT TO SCALE

REVISION DATES

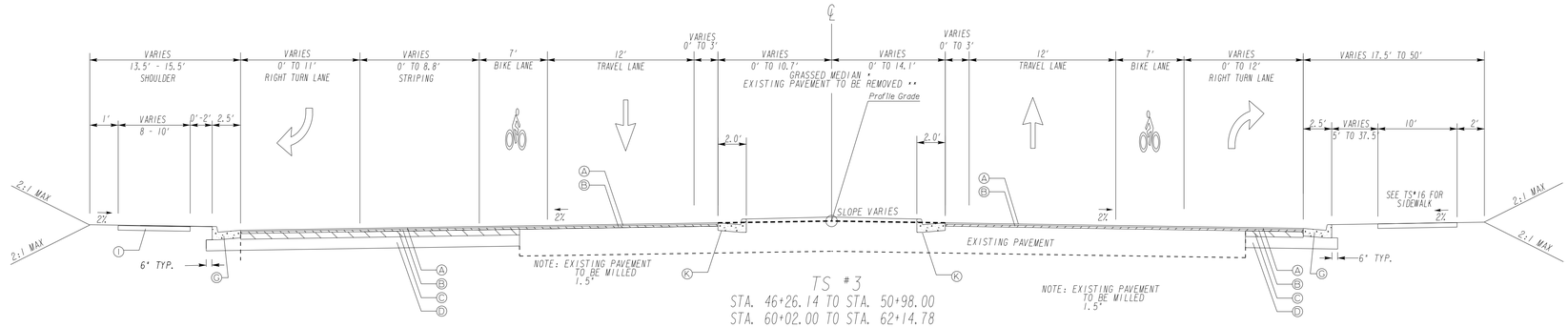
CITY OF JOHNS CREEK
PUBLIC WORKS

TYPICAL SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
5-001

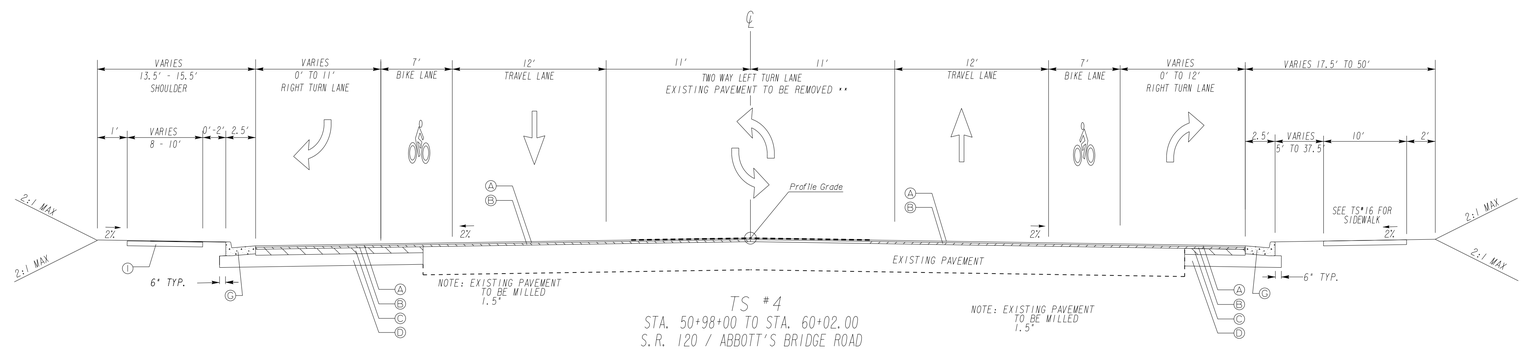
3/1/2007 GPLN



TS #3
STA. 46+26.14 TO STA. 50+98.00
STA. 60+02.00 TO STA. 62+14.78
STA. 74+46.41 TO STA. 82+54.00
S.R. 120 / ABBOTT'S BRIDGE ROAD

* GRASSED MEDIAN SHOWN. SEE PLANS FOR LOCATIONS OF 4" CONCRETE MEDIAN.

** REMOVAL OF EXISTING PAVEMENT TO BE INCLUDED IN PRICE FOR GRADING COMPLETE.



TS #4
STA. 50+98+00 TO STA. 60+02.00
S.R. 120 / ABBOTT'S BRIDGE ROAD

NOTES:

1. LOCATION OF EXISTING PAVEMENT VARIES WITH RESPECT TO THE PROPOSED CENTERLINE.
2. FOR SUPERELEVATION RATE AND LOCATIONS, SEE ROADWAY PLANS
3. CURB & GUTTER ON HIGH SIDE OF SUPERELEVATION TO SLOPE SAME AS PAVEMENT.
4. GRASS PLOT BETWEEN CURB AND GUTTER AND SIDEWALK TO BE SOD.
5. CURB & GUTTER SHOWN ADJACENT IN MEDIAN LOCATIONS. SEE PLANS FOR LOCATIONS OF CONCRETE INTEGRAL MEDIAN.

REQUIRED PAVEMENT

- (A) RECYL ASPH CONC 12.5 MM SP, GP 2 ONLY, INCL BITUM MATL & H LIME, 1.5" (165 LBS/SY)
- (B) RECYL ASPH CONC 19 MM SP, GP 1 OR 2, INCL BITUM MATL & H LIME, 2" (220 LBS/SY)
- (C) RECYL ASPH CONC 25 MM SP, GP 1 OR 2, INCL BITUM MATL & H LIME, 6" (660 LBS/SY)
- (D) 12" GRADED AGGREGATE BASE
- (E) RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME. (AS REQUIRED BY ENGINEER)
- (F) CONC MEDIAN, 4" THICK
- (G) CONC CURB & GUTTER, 8"X30" TP 2
- (I) CONC SIDEWALK, 4" (8'-10' ENHANCED SIDEWALK)
- (J) CONC HEADER CURB, 6" TP 7
- (K) CONC CURB & GUTTER, 6"X24" TP 7

Johns Creek

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REVISION DATES		

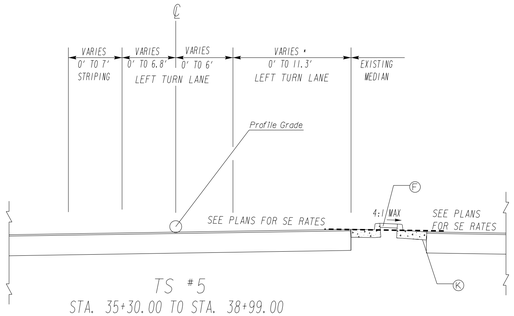
CITY OF JOHNS CREEK
PUBLIC WORKS

TYPICAL SECTIONS

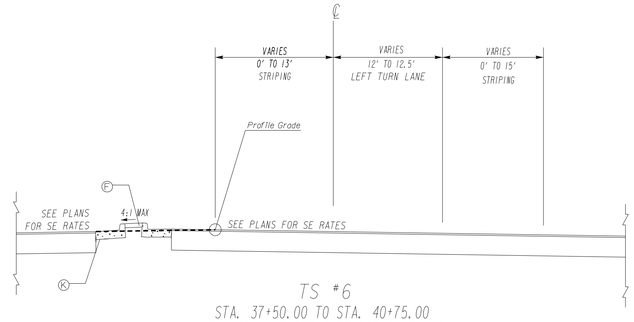
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 5-002

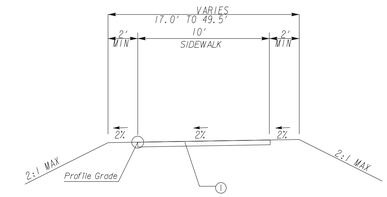
LEFT TURN LANE TYPICAL SECTIONS:



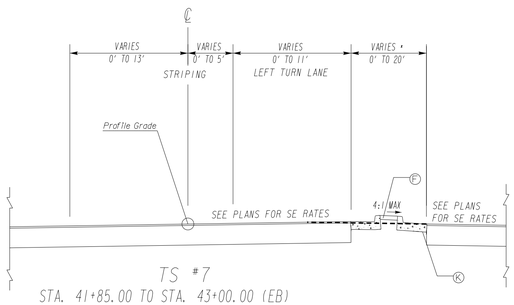
TS #5
STA. 35+30.00 TO STA. 38+99.00
S.R. 120 / ABBOTT'S BRIDGE ROAD (EB)
FOR OVERALY AND FULL DEPTH SECTIONS SEE PLANS FOR DETAILS



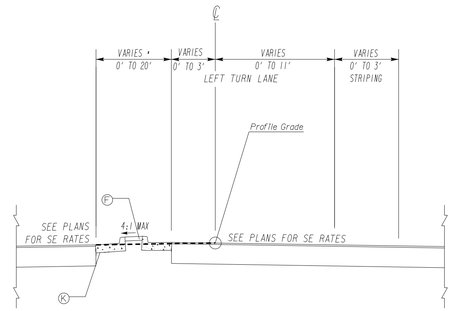
TS #6
STA. 37+50.00 TO STA. 40+75.00
S.R. 120 / ABBOTT'S BRIDGE ROAD (WB)
FOR OVERALY AND FULL DEPTH SECTIONS SEE PLANS FOR DETAILS



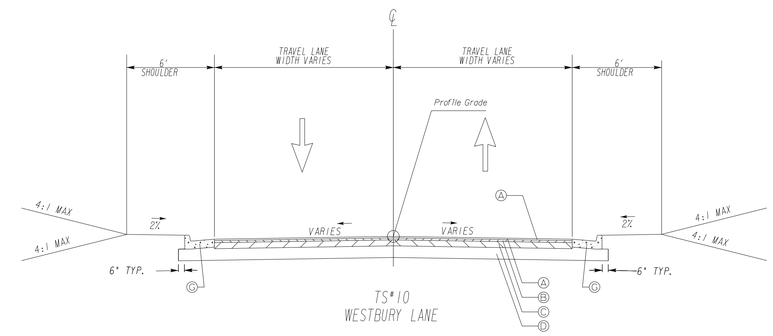
TS #9
RIGHT ENHANCED SIDEWALK TYPICAL
S.R. 120 / ABBOTT'S BRIDGE ROAD
SIDEWALK SLOPE TRANSITIONS:
FROM +2% AT STA. 219+25.00 TO -2% AT STA. 220+75.00
-2% FROM STA. 220+75.00 TO STA. 223+50.00
FROM -2% AT STA. 223+50.00 TO +2% AT STA. 228+50.00



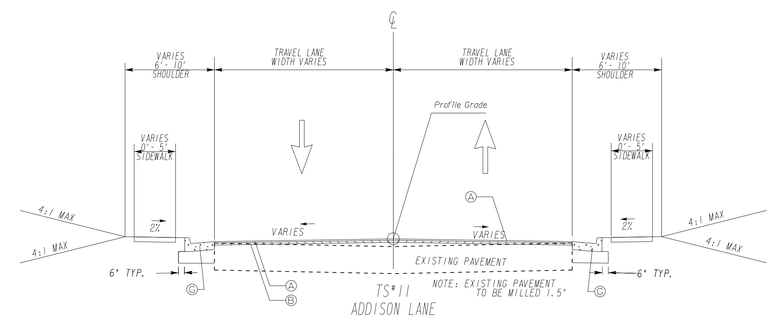
TS #7
STA. 41+85.00 TO STA. 43+00.00 (EB)
* GREATER THAN 8', MEDIAN TO BE GRASSED
FOR OVERALY AND FULL DEPTH SECTIONS SEE PLANS FOR DETAILS



TS #8
(RIGHT SIDE SHOWN, LEFT SIDE SIMULAR)
STA. 43+00.00 TO STA. 45+87.00 RT
STA. 50+91.93 TO STA. 54+05.11 RT
STA. 54+77.50 TO STA. 56+14.71 RT
STA. 56+91.87 TO STA. 60+10.00 LT
STA. 61+30.00 TO STA. 64+75.50 RT
STA. 65+57.67 TO STA. 69+17.03 LT/RT
STA. 77+14.23 TO STA. 80+41.76 RT
S.R. 120 / ABBOTT'S BRIDGE ROAD
* GREATER THAN 8', MEDIAN TO BE GRASSED
FOR OVERALY AND FULL DEPTH SECTIONS SEE PLANS FOR DETAILS



TS#10
WESTBURY LANE



TS#11
ADDISON LANE
DUNHILL PLACE DRIVE
NORTH HILLBROOKE TRACE
ABBOTTS WAY
GLENMOORE PATH
BYERS ROAD
VIGNEAU DRIVE

NOTES:

1. LOCATION OF EXISTING PAVEMENT VARIES WITH RESPECT TO THE PROPOSED CENTERLINE.
2. FOR SUPERELEVATION RATE AND LOCATIONS, SEE ROADWAY PLANS
3. CURB & GUTTER ON HIGH SIDE OF SUPERELEVATION TO SLOPE SAME AS PAVEMENT.
4. GRASS PLOT BETWEEN CURB AND GUTTER AND SIDEWALK TO BE SOD.
5. CURB & GUTTER SHOWN ADJACENT IN MEDIAN LOCATIONS. SEE PLANS FOR LOCATIONS OF CONCRETE INTEGRAL MEDIAN.

REQUIRED PAVEMENT

- (A) RECYL ASPH CONC 12.5 MM SP,GP 2 ONLY, INCL BITUM MATL & H LIME, 1.5" (165 LBS/SY)
- (B) RECYL ASPH CONC 19 MM SP,GP 1 OR 2, INCL BITUM MATL & H LIME, 2" (220 LBS/SY)
- (C) RECYL ASPH CONC 25 MM SP,GP 1 OR 2, INCL BITUM MATL & H LIME, 6" (660 LBS/SY)
- (D) 12" GRADED AGGREGATE BASE
- (E) RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME, (AS REQUIRED BY ENGINEER)
- (F) CONC MEDIAN, 4" THICK
- (G) CONC CURB & GUTTER, 8"X30" TP 2
- (I) CONC SIDEWALK, 4" (8'-10' ENHANCED SIDEWALK)
- (J) CONC HEADER CURB, 6" TP 7
- (K) CONC CURB & GUTTER, 6"X24" TP 7

Johns Creek

Stantec

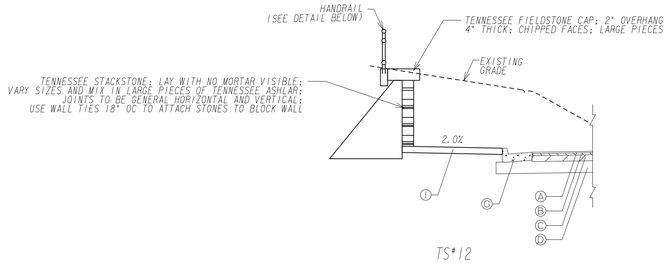
REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

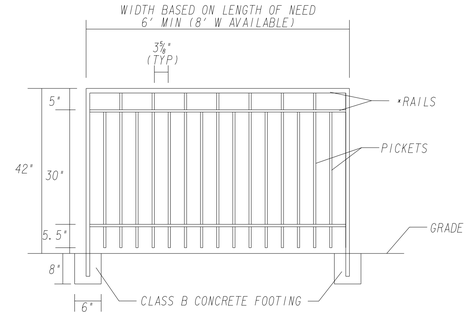
TYPICAL SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
5-003



TS#12
GRAVITY RETAINING WALL
STA. 41+50.00 TO STA. 43+75.00 (WALL 1)
STA. 67+10.00 TO STA. 68+50.00 (WALL 2)
STA. 69+90.00 TO STA. 72+50.00 (WALL 3)
S.R. 120 / ABBOTT'S BRIDGE ROAD



NOTES:
1. DECORATIVE ORNAMENTAL HANDRAIL SHALL BE BLACK IN COLOR.
2. CONTRACTOR MUST SUBMIT HANDRAIL SPECIFICATIONS TO CITY OF JOHNS CREEK PROJECT CONTACT PRIOR TO PURCHASE.

*RAILING TO BE CONSTRUCTED CONTINUOUSLY. COORDINATE WITH CITY OF JOHNS CREEK.

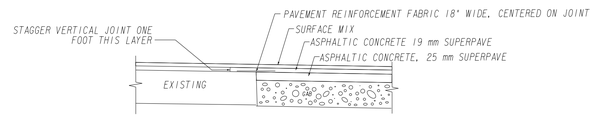
HANDRAIL DETAIL

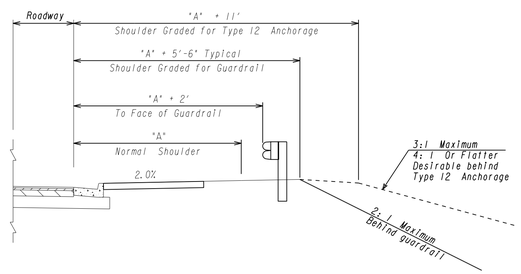
NOTES:
1. LOCATION OF EXISTING PAVEMENT VARIES WITH RESPECT TO THE PROPOSED CENTERLINE.
2. FOR SUPERELEVATION RATE AND LOCATIONS, SEE ROADWAY PLANS
3. CURB & GUTTER ON HIGH SIDE OF SUPERELEVATION TO SLOPE SAME AS PAVEMENT.
4. GRASS PLOT BETWEEN CURB AND GUTTER AND SIDEWALK TO BE SOD.
5. CURB & GUTTER SHOWN ADJACENT IN MEDIAN LOCATIONS. SEE PLANS FOR LOCATIONS OF CONCRETE INTEGRAL MEDIAN.

REQUIRED PAVEMENT

(A) RECYL ASPH CONC 12.5 MM SP, GP 2 ONLY, INCL BITUM MATL & H LIME, 1.5" (165 LBS/SY)
(B) RECYL ASPH CONC 19 MM SP, GP 1 OR 2, INCL BITUM MATL & H LIME, 2" (220 LBS/SY)
(C) RECYL ASPH CONC 25 MM SP, GP 1 OR 2, INCL BITUM MATL & H LIME, 6" (660 LBS/SY)
(D) 12" GRADED AGGREGATE BASE
(E) RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME, (AS REQUIRED BY ENGINEER)
(F) CONC MEDIAN, 4" THICK
(G) CONC CURB & GUTTER, 8"X30" TP 2
(I) CONC SIDEWALK, 4" (8'-10' ENHANCED SIDEWALK)
(J) CONC HEADER CURB, 6" TP 7
(K) CONC CURB & GUTTER, 6"X24" TP 7

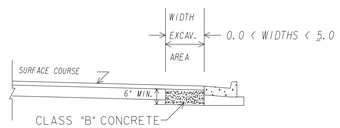
TYPICAL SECTION DETAIL TO BE USED WHEN EXISTING PAVEMENT IS TO BE RESURFACED WITH TWO INCHES OR MORE OF ASPHALTIC CONCRETE





TYPICAL SHOULDER DETAIL FOR GUARDRAIL

SEE PLAN FOR LOCATION
(RIGHT SIDE SHOWN. LEFT SIDE SIMILAR)



NO SCALE
CLASS "B" CONCRETE BASE OR PAVEMENT WIDENING
Item Code 500-9999 - Cu. Yds.

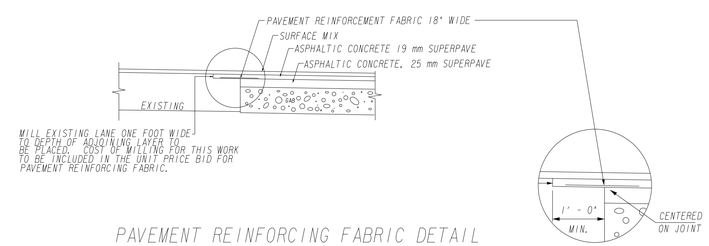
In excavated areas between the existing paving and new curb and gutter that are 5'-0" or less in width, Class "B" concrete shall be placed in lieu of the base and paving specified by the typical section. Payment will be made under "Class B Concrete Base and Pavement Widening".

In excavated areas greater than 5'-0" in width, the Contractor shall place base and paving as specified on the typical section.

See plans for details of curb and gutter construction.

CLASS "B" CONCRETE BASE OR WIDENING DETAIL

TYPICAL SECTION DETAIL TO BE USED WHEN EXISTING PAVEMENT IS TO BE RESURFACED WITH LESS THAN TWO INCHES OF ASPHALTIC CONCRETE



PAVEMENT REINFORCING FABRIC DETAIL

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

TYPICAL SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
5-004

3/1/2007 GPLN

TRAFFIC CONTROL - CSHPP-0007-00(310)	
TOTAL	LUMP SUM

GRADING COMPLETE - CSHPP-0007-00(310)	
TOTAL	LUMP SUM

CONSTRUCTION VIBRATION MONITORING	
TOTAL	1 LS

IRRIGATION SYSTEM	
TOTAL	1 LS

SURFACING QUANTITIES	UNIT	SR 120	DRIVEWAYS	PATCHING	TOTAL
RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME - AS DIRECTED BY ENGINEER	TON	0	0	0	500
RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	TON	3560	10	0	3570
RECYCLED ASPH CONC 19 MM SUPERPAVE, GROUP 1 OR 2, INCL BITUM MATL & H LIME	TON	4640	0	150	4790
RECYCLED ASPH CONC 25 MM SUPERPAVE, GROUP 1 OR 2, INCL BITUM MATL & H LIME	TON	4380	0	0	4380
GR AGGR BASE CRS, INCL MATL	TON	9700	70	0	9770
BITUM TACK COAT	GAL	5729	1	0	5730
MILL ASPH CONC PVMT, (1.5" DEPTH)	SY	28890	0	0	28890
CLASS B PAVEMENT WIDENING	CY	150	0	0	150
CONC VALLEY GUTTER 6"	SY	0	82	0	82
CONC VALLEY GUTTER 8"	SY	0	44	0	44
DRIVEWAY CONCRETE 6"	SY	0	102	0	102
DRIVEWAY CONCRETE 8"	SY	0	52	0	52

AGGR SURF CRS	
TOTAL	1000 TONS

NOTE: AGGREGATE SURFACE COURSE IS FOR USE IN INCLEMENT WEATHER TO FACILITATE THE MOVEMENT OF LOCAL TRAFFIC ALONG ROADWAY CONSTRUCTION AND TO PERMIT INGRESS & EGRESS AT DRIVES. WHEN USED FOR THIS PURPOSE, SECTION 318 OF GEORGIA STANDARD SPECIFICATIONS IS MODIFIED TO PERMIT TRUCK DUMPING ON UNPAVED AND MUDDY SUBGRADE.

THE CONTRACTOR WILL HAVE THE CHOICE OF THE FOLLOWING MATERIALS:

GRADED AGGREGATE - ART. 815.01
COARSE AGGREGATE - SIZE - 467 - ART. 800.01
STABILIZER AGGREGATE - TYPE 1 OR 2 - SECT. 803

ALL MATERIALS TO BE USED AS DIRECTED BY THE ENGINEER.

PLANT TOPSOIL	
TOTAL	50 CY

CUPRESSOCYPARIS LEYLANDII	
TOTAL	100 EACH

MILL ASPH CONC PVMT, VARIABLE DEPTH	
AS DIRECTED BY ENGINEER	500 S.Y.

CONC. SIDEWALK, 4 IN THICK GA. DET. A-3	
TOTAL	9,370 S.Y.

CONCRETE MEDIAN, 6" THICK	
TURN LANE ISLANDS	143 S.Y.
MEDIAN FROM STA. 36.48.48 TO STA. 38+81.87	157 S.Y.
TOTAL	300 S.Y.

CONC. CURB & GUTTER, 8IN X 30IN, TP 2 GA. STD. 9032-B	
TOTAL	10,350 L.F.

CONC. CURB & GUTTER, 6IN X 24IN, TP 7 GA. STD. 9032-B	
TOTAL	12,000 L.F.

DRIVEWAYS*

SR 120

LOCATION	LENGTH (LF)	WIDTH (LF)	TYPE
STA. 50+56 LT	32	14	CONCRETE
STA. 51+32 LT	32	14	CONCRETE
STA. 68+25 RT	61.3	16	ASPHALT
STA. 80+41 LT	25.5	16	CONCRETE

*FOR INFO ONLY. SEE SURFACING QUANTITIES.

CONCRETE MEDIAN, 4" THICK	
TOTAL	190 S.Y.

CONCRETE RIGHT-OF-WAY MARKERS GA. STD. 9003	
TOTAL	21 EACH

PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH	
TOTAL	9,350 L.F.

CHANGEABLE MESSAGE SIGN, PORTABLE, TP 3	
AS DIRECTED BY ENGINEER	4 EACH

GUARDRAIL, 31 IN HEIGHT

LOCATION: SR 120	W-BEAM	TP 1 ANCHOR	TP 12 ANCHOR*
STA. 59+00 TO STA. 62+50 LT	350 L.F.	1	1
TOTAL	350 L.F.	1	1

*NON-FLARE ANCHORS

CONC. SIDEWALK, 8 IN THICK GA. DET. A-3	
TOTAL	930 S.Y.

Johns Creek

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CITY OF JOHNS CREEK
PUBLIC WORKS

SUMMARY QUANTITIES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING NO. 6-001

CLASS "B" CONCRETE, RETAINING WALL GA. STD. 9031-L	
WALL 1 41+50.00 TO 43+75.00 LT SR 120	39 C.Y.
WALL 2 67+10.00 TO 68+50.00 LT SR 120	40 C.Y.
WALL 3 69+90.00 TO 71+50.00 LT SR 120	41 C.Y.
WALL 5 80+24.83 TO 80+71.71 LT SR 120	22 C.Y.
WALL 6 38+05.00 TO 38+70.00 RT SR 120	11 C.Y.
TOTAL	153 C.Y.

CITY OF JOHNS CREEK HANDRAIL	
LOCATION	
STA. 38+05 TO 38+70 RT ABBOTTS BRIDGE RD	65 L.F.
STA. 41+50 TO 43+75 LT ABBOTTS BRIDGE RD	238 L.F.
STA. 67+10 TO 68+50 LT ABBOTTS BRIDGE RD	137 L.F.
STA. 69+90 TO 71+50 LT ABBOTTS BRIDGE RD	156 L.F.
STA. 74+00 TO 78+00 LT ABBOTTS BRIDGE RD	400 L.F.
STA. 80+25 TO 80+72 LT ABBOTTS BRIDGE RD	86 L.F.
AS DIRECTED BY THE ENGINEER	18 L.F.
TOTAL	1100 L.F.

*CLASS 'A' CONCRETE, INCL. REINF. STEEL FOR GA STD. 1125 HEADWALLS	
TOTAL	7 C.Y.

*SEE DRAINAGE QUANTITY TABLES FOR LOCATIONS

PLAIN CONC DITCH PAVING, 4 IN					
LOCATION	SLOPE	BOTTOM	DEPTH	LENGTH	QUANTITY
SR 120		(FT)	(FT)	(FT)	(SY)
STA 57+60 to STA 59+50 LT	VARIES	2	1	190	188
TOTAL					188

STONE FACING	
WALL 1 41+50.00 TO 43+75.00 LT SR 120	650 S.F.
WALL 2 67+10.00 TO 68+50.00 LT SR 120	750 S.F.
WALL 3 69+90.00 TO 71+50.00 LT SR 120	700 S.F.
WALL 5 80+24.83 TO 80+71.71 LT SR 120	310 S.F.
WALL 6 38+05.00 TO 38+70.00 RT SR 120	190 S.F.
TOTAL	2600 S.F.

*FLOWABLE FILL	
TOTAL	100 C.Y.

* AS DIRECTED BY ENGINEER.

PLASTIC FILTER FABRIC	
ABBOTTS BRIDGE ROAD	34 S.Y.

STN DUMPED RIP RAP, TP 1, 24 IN	
LOCATION	
59+75 LT ABBOTTS BRIDGE ROAD	26 S.Y.
TOTAL	26 S.Y.

STN DUMPED RIP RAP, TP 3, 12 IN	
LOCATION	
75+90 RT ABBOTTS BRIDGE ROAD	8 S.Y.
TOTAL	8 S.Y.

MODULAR BLOCK RETAINING WALL				
	MBRW SEGMENTAL CONCRETE FACING UNIT	MBRW BACKFILL MATERIAL	MBRW CONCRETE LEVELING PAD	MBRW CIP COPING, A
LOCATION	SF	CY	LF	LF
STA 73+90 TO STA 78+00 LT	4444	2037	403	403
PROJECT TOTAL:	4444	2037	403	403

EROSION CONTROL QUANTITIES		
PERMANENT GRASS	AC	10
TEMPORARY GRASS	AC	5
MULCH	TN	45
AGRICULTURAL LIME	TN	30
FERTILZER NITROGEN CONTENT	LB	4000
FERTILZER MIXED GRADE	TN	1
EROSION CONTROL MATS, SLOPES	SY	1850
TEMPORARY SILT FENCE, TYPE C	LF	6050
CONSTRUCT AND REMOVE FABRIC CHECK DAMS - TP C SILT FENCE	LF	1000
CONSTRUCT AND REMOVE RIP RAP CHECK DAMS, STONE PLAIN RIP RAP SAND BAGS	EA	7
CONSTRUCT AND REMOVE INLET SEDIMENT TRAPS	EA	81
CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	EA	4
CONSTRUCTION EXITS	EA	4
WATER QUALITY MONITORING AND SAMPLING	EA	2
WATER QUALITY INSPECTIONS	MO	18
SOD	SY	8700
MAINTENANCE OF TEMPORARY SILT FENCE, TYPE C	LF	3025
MAINTENANCE OF CHECK DAMS - ALL TYPES	LF	500
MAINTENANCE OF CONSTRUCTION EXITS	EA	4
MAINTENANCE OF INLET SEDIMENT TRAPS	EA	81
MAINTENANCE OF SILT CONTROL GATE, TP 3	EA	4

ORANGE BARRIER FENCE	
ABBOTTS BRIDGE ROAD	1,200 L.F.

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SUMMARY QUANTITIES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
6-002

SEE GENERAL NOTES FOR PIPE MATERIAL.

ALL STORM DRAIN PIPE WITH A GRADE OVER 10% OR NOTED C.M. PIPE ONLY WILL BE TYPE 'C' CORRUGATED STEEL OR ALUMINUM. (TYPE 'C' WILL BE REQUIRED IN LIEU OF TYPE 'B' DUE TO RESULT OF LABORATORY CORROSION TESTS. *DENOTES CORRUGATED METAL PIPE ONLY.
ALL STORM DRAINS TO BE EXTENDED IN KIND, IE. CONC. FOR CONC., CORRUGATED METAL FOR CORRUGATED METAL, ETC.

ALL CONCRETE SANITARY SEWER AND COMBINATION SANITARY SEWER AND STORM DRAIN PIPE WILL HAVE O-RING JOINTS.

STRUCTURE NUMBER	LOCATION	18"	24"	30"	36"	42"	48"	APPROXIMATE GRADE OF PIPE %	MAXIMUM HEIGHT OF FILL OVER PIPE (APPROXIMATE) FEET	42" FLARED END SECTIONS GA. STD. 1120 STORM DRAIN EACH	SAFETY SLOPE END SECTIONS GA. STD. 1122 STORM DRAIN EACH	CONCRETE HEADWALL GA. STD. 1001-B EACH	ADJUST MANHOLE TO GRADE EACH	ADJUST CATCH BASIN TO GRADE EACH	ADJUST DROP INLET TO GRADE EACH	INLET/OUTLET HEADWALL GA. STD. 1125 EACH / SIZE
	SR 120															
EX	STA. 36+00.00 LT												1			
EX	STA. 37+50.00 LT												1			
A-1	STA. 40+70.78 LT															
A-2(EX)	STA. 40+73.67 RT													1		
B-1	STA. 43+08.98 RT	35						3.71	2.8							
B-2	STA. 43+11.90 RT	124						1.93	3.3							
B-2.1	STA. 44+41.40 RT	15						1.00	3.3							
B-2.2	STA. 44+40.00 RT	15						1.98	6.5							
B-3	STA. 44+83.81 RT	41						1.00	3.3							
B-3.1	STA. 45+50.50 LT	110						1.00	5.9							
B4	STA. 44+38.03 LT															
EX	STA. 46+14.00 LT														1	
EX	STA. 46+56.00 LT														1	
D-1	STA.46+58.03 RT	274						0.86	2.8							
EX	STA. 48+29.11 LT														1	
D-2	STA. 49+32.00 RT	98						1.82	3.5							
D-3	STA. 50+30.00 LT	86						0.87	3.5							
D-4	STA. 50+30.00 RT	195						2.03	3.5							
D-5	STA. 52+25.00 RT	175						3.06	2.8							
D-6	STA. 54+00.00 LT	86						0.50	2.8							
D-7	STA. 54+00.00 RT	197						2.71	2.8							
D-8	STA. 56+00.00 RT	44						5.68	3.7							
	ABBOTTS WAY															
D-9	STA.140+67.66, 15.57' RT															
D-9.1	STA. 140+68.84 , 16.28' LT													1		
	NORTH HILLBROOKE TRACE															
E-1	STA. 130+77.22, 48.62' LT	45						1.00	4.4							
E-2	STA. 130+70.44, 3.60' LT	32						0.91	4.4							
E-3	STA. 130+72.71, 29.02 RT	63						2.40	4							
E-4	STA. 130+85.09, 92.89' RT															1 / 18
	TOTAL SHT 6-003	1635	0	0	0	0	0			0			2	2	3	

STRUCTURE NUMBER	CATCH BASIN GROUP 1 GA. STD. 1033-D 6.0 FT OR LESS EACH	CATCH BASIN GROUP 1 GA. STD. 1033-D ADDITIONAL DEPTH FT	CATCH BASIN GROUP 1 GA. STD. 1034-D 6.0 FT OR LESS EACH	CATCH BASIN GROUP 1 GA. STD. 1034-D ADDITIONAL DEPTH FT	CATCH BASIN GROUP 1 6.0 FT OR LESS EACH	CATCH BASIN GROUP 1 ADDITIONAL DEPTH FT	CATCH BASIN GROUP 1 6.0 FT OR LESS EACH	CATCH BASIN GROUP 1 ADDITIONAL DEPTH FT	DROP INLET GROUP 1 GA. STD. 1019-A TYPE D 6.0 FT OR LESS EACH	DROP INLET GROUP 1 GA. STD. 1019-A TYPE D ADDITIONAL DEPTH FT	DROP INLET GROUP 1 GA. STD. 1019-B TP V-1 6.0 FT OR LESS EACH	DROP INLET GROUP 1 GA. STD. 1019-B TP V-1 ADDITIONAL DEPTH FT	DROP INLET GROUP 1 GA. DET. D-3 6.0 FT OR LESS EACH	DROP INLET GROUP 1 GA. DET. D-3 ADDITIONAL DEPTH FT	DROP INLET GROUP 1 GA. STD. 9031-S 6.0 FT OR LESS EACH	DROP INLET GROUP 1 GA. STD. 9031-S ADDITIONAL DEPTH FT
SR 120																
EX																
EX																
A-1	1															
A-2(EX)																
B-1											1					
B-2	1															
B-2.1	1	3														
B-2.2																
B-3	1	4														
B-3.1											1					
B4											1	2				
EX																
EX																
D-1	1															
EX																
D-2	1															
D-3	1															
D-4	1															
D-5	1															
D-6	1															
D-7	1															
D-8	1															
ABBOTTS WAY																
D-9											1					
D-9.1																
NORTH HILLBROOKE TRACE																
E-1															1	
E-2			1	1												
E-3			1													
E-4																
TOTAL SHT 6-003	12	7	2	1	0	0	0	0	0	0	4	2	0	0	1	0

STRUCTURE NUMBER	CATCH BASIN GROUP 2 GA. STD. 1033-D 6.0 FT OR LESS EACH	CATCH BASIN GROUP 2 GA. STD. 1033-D ADDITIONAL DEPTH FT	CATCH BASIN GROUP 2 GA. STD. 1034-D 6.0 FT OR LESS EACH	CATCH BASIN GROUP 2 GA. STD. 1034-D ADDITIONAL DEPTH FT	CATCH BASIN GROUP 2 6.0 FT OR LESS EACH	CATCH BASIN GROUP 2 ADDITIONAL DEPTH FT	CATCH BASIN GROUP 2 6.0 FT OR LESS EACH	CATCH BASIN GROUP 2 ADDITIONAL DEPTH FT	DROP INLET GROUP 2 GA. STD. 1019-A TYPE D 6.0 FT OR LESS EACH	DROP INLET GROUP 2 GA. STD. 1019-A TYPE D ADDITIONAL DEPTH FT	DROP INLET GROUP 2 GA. STD. 1019-B TP V-1 6.0 FT OR LESS EACH	DROP INLET GROUP 2 GA. STD. 1019-B TP V-1 ADDITIONAL DEPTH FT	DROP INLET GROUP 2 GA. STD. 1035 6.0 FT OR LESS EACH	DROP INLET GROUP 2 GA. STD. 1035 ADDITIONAL DEPTH FT	DROP INLET GROUP 2 GA. STD. 9031-S 6.0 FT OR LESS EACH	DROP INLET GROUP 2 GA. STD. 9031-S ADDITIONAL DEPTH FT
SR 120																
EX																
EX																
A-1																
A-2(EX)																
B-1																
B-2																
B-2.1																
B-2.2																
B-3																
B-3.1																
B4																
EX																
EX																
D-1																
EX																
D-2																
D-3																
D-4																
D-5																
D-6																
D-7																
D-8																
ABBOTTS WAY																
D-9																
D-9.1																
NORTH HILLBROOKE TRACE																
E-1																
E-2																
E-3																
E-4																
TOTAL SHT 6-003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STRUCTURE NUMBER	MANHOLE GA. STD. 1011-A TYPE 1 (PIPE UP TO 42") 6.0 FT OR LESS EACH	ADDITIONAL DEPTH CLASS 1 FT	ADDITIONAL DEPTH CLASS 2 FT	ADDITIONAL DEPTH CLASS 3 FT	ADDITIONAL DEPTH CLASS 4 FT	REMARKS
SR 120						
EX						
EX						
A-1						
A-2(EX)						EXIST.
B-1						
B-2						
B-2.1						
B-2.2	1	3				
B-3						
B-3.1						
B4						
EX						
EX						
D-1						
EX						
D-2						
D-3						
D-4						
D-5						
D-6						
D-7						
D-8						
ABBOTTS WAY						
D-9						
D-9.1						EXIST.
NORTH HILLBROOKE TRACE						
E-1						
E-2						
E-3						
E-4						OUTLET HEADWALL
TOTAL SHT 6-003	1	3	0	0	0	

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SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 6-003

SEE GENERAL NOTES FOR PIPE MATERIAL.

ALL STORM DRAIN PIPE WITH A GRADE OVER 10% OR NOTED C.M. PIPE ONLY WILL BE TYPE 'C' CORRUGATED STEEL OR ALUMINUM. (TYPE 'C' WILL BE REQUIRED IN LIEU OF TYPE 'B' DUE TO RESULT OF LABORATORY CORROSION TESTS. *DENOTES CORRUGATED METAL PIPE ONLY.

ALL STORM DRAINS TO BE EXTENDED IN KIND, IE. CONC. FOR CONC., CORRUGATED METAL FOR CORRUGATED METAL, ETC.

ALL CONCRETE SANITARY SEWER AND COMBINATION SANITARY SEWER AND STORM DRAIN PIPE WILL HAVE O-RING JOINTS.

STRUCTURE NUMBER	LOCATION	18"	24"	30"	36"	42"	48"	APPROXIMATE GRADE OF PIPE %	MAXIMUM HEIGHT OF FILL OVER PIPE (APPROXIMATE) FEET	42" FLARED END SECTIONS GA. STD. 1120 STORM DRAIN EACH	SAFETY SLOPE END SECTIONS GA. STD. 1122 STORM DRAIN EACH	CONCRETE HEADWALL GA. STD. 1001-B EACH	ADJUST MANHOLE TO GRADE EACH	ADJUST CATCH BASIN TO GRADE EACH	ADJUST DROP INLET TO GRADE EACH	INLET/OUTLET HEADWALL GA. STD. 1125 EACH / SIZE	CATCH BASIN GROUP 1								DROP INLET GROUP 1								CATCH BASIN GROUP 2								DROP INLET GROUP 2								MANHOLE GA. STD. 1011-A					REMARKS
																	GA. STD. 1033-D		GA. STD. 1034-D						GA. STD. 1019-A TYPE D		GA. STD. 1019-B TP V-1		GA. DET. D-3		GA. STD. 9031-S		GA. STD. 1033-D		GA. STD. 1034-D				GA. STD. 1019-A TYPE D		GA. STD. 1019-B TP V-1		GA. STD. 1035		GA. STD. 9031-S		TYPE 1 (PIPE UP TO 42")					
																	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH

SEE GENERAL NOTES FOR PIPE MATERIAL.

ALL STORM DRAIN PIPE WITH A GRADE OVER 10% OR NOTED C.M. PIPE ONLY WILL BE TYPE 'C' CORRUGATED STEEL OR ALUMINUM. (TYPE 'C' WILL BE REQUIRED IN LIEU OF TYPE 'B' DUE TO RESULT OF LABORATORY CORROSION TESTS. *DENOTES CORRUGATED METAL PIPE ONLY.

ALL STORM DRAINS TO BE EXTENDED IN KIND, IE. CONC. FOR CONC., CORRUGATED METAL FOR CORRUGATED METAL, ETC.

ALL CONCRETE SANITARY SEWER AND COMBINATION SANITARY SEWER AND STORM DRAIN PIPE WILL HAVE O-RING JOINTS.

STRUCTURE NUMBER	LOCATION	18"	24"	30"	36"	42"	48"	APPROXIMATE GRADE OF PIPE	MAXIMUM HEIGHT OF FILL OVER PIPE (APPROXIMATE)	42" FLARED END SECTIONS GA. STD. 1120 STORM DRAIN	SAFETY SLOPE END SECTIONS GA. STD. 1122 STORM DRAIN	CONCRETE HEADWALL GA. STD. 1001-B	ADJUST MANHOLE TO GRADE	ADJUST CATCH BASIN TO GRADE	ADJUST DROP INLET TO GRADE	INLET/OUTLET HEADWALL GA. STD. 1125
								%	FEET	EACH	EACH	EACH	EACH	EACH	EACH	EACH / SIZE
	SR 120															
G-5.2	STA. 73+60.00 RT	55						5.76	2.25							
G-6	STA. 73+88.00 LT	212						3.99	3							
G-6.1	STA. 73+88, 48.17' LT	16						5.50	4							
G-7	STA. 76+00.00 LT	202						4.17	2.8							
G-8	STA. 78+02.00 LT	183						4.45	3.17							
G-8.1	STA. 78+01.62, 48.17' LT	12						2.08	3.5							
G-9	STA. 79+85.00 LT			165				4.01	3.17							
G-10	STA. 79+52.97, 69.24' LT		47					2.22	6.5							
G-11	STA. 81+50.00 LT			202				3.80	3.2							
G-12	STA. 83+51.49 LT			45				6.16	4.1							
G-13	STA. 83+91.43 LT			36				0.98	4.1							
G-14	STA.84+27.00 LT															
H-1.2	STA. 72+50 RT	148						2.28	2.6							
H-1.1	STA. 74+00, 44.72' RT	191						3.98	2.6							
H-1	STA. 75+91.28, 46.17' RT	41						1.66	2.3							
H-2	STA. 75+65.85, 79.40' RT															1 / 18
I-1	STA. 78+20.00 RT	246						3.42	4.5							
I-1.1	STA. 78+14.09, 50.62' RT	16						2.13	4.5							
I-1.2	STA 77+76, 72' RT	42						16.76	2.5							1 / 18
I-2	STA. 80+65.00 RT	236						4.17	3							
I-3	STA. 83+00.00 RT		57					3.15	3							
I-4	STA. 83+00, 63.06' RT		19					4.70	3							
I-5	STA. 83+55.74, 39.15' RT															
	TOTAL SHT 6-005	1600	123	448	0	0	0			0	0		0	0	0	
	TOTAL SHT 6-003	1635	0	0	0	0	0			0	0		2	2	3	
	TOTAL SHT 6-004	1949	81	0	0	0	0			0	0		0	0	0	
	TOTAL	**5184**	**204**	**448**	**0**	**0**	**0**			**0**	**0**		**2**	**2**	**3**	

STRUCTURE NUMBER	CATCH BASIN GROUP 1								DROP INLET GROUP 1								CATCH BASIN GROUP 2								DROP INLET GROUP 2								MANHOLE GA. STD. 1011-A					REMARKS
	GA. STD. 1033-D		GA. STD. 1034-D						GA. STD. 1019-A TYPE D		GA. STD. 1019-B TP V-1		GA. DET. D-3		GA. STD. 9031-S		GA. STD. 1033-D		GA. STD. 1034-D						GA. STD. 1019-A TYPE D		GA. STD. 1019-B TP V-1		GA. STD. 1035		GA. STD. 9031-S		TYPE 1 (PIPE UP TO 42")					
	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	6.0 FT OR LESS	ADDITIONAL DEPTH	CLASS 1	CLASS 2	CLASS 3	CLASS 4	
EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	EACH	FT	FT	FT	FT		
SR 120																																								
G-5.2											1																													
G-6	1																																							
G-6.1															1																									
G-7	1																																							
G-8	1																																							
G-8.1															1																									
G-9	1	1																																						
G-10																																			1	3				
G-11	1																																							
G-12	1																																							
G-13											1	2																												
G-14											1	2																												
H-1.2															1																									SIDE DRAIN
H-1.1															1																									SIDE DRAIN
H-1	1																																							8 SY RIP RAP
H-2																																								OUTLET HEADWALL
I-1	1	1																																						
I-1.1															1																									
I-1.2																																								
I-2	1																																							
I-3	1																																							
I-4															1																									
I-5																																			1					
TOTAL SHT 6-005	10	2	0	0	0	0	0	0	0	0	3	4	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0		
TOTAL SHT 6-003	12	7	2	1	0	0	0	0	0	0	4	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0		
TOTAL SHT 6-004	12	18	0	0	0	0	0	0	0	0	9	0	0	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	**34**	**27**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**6**	**0**	**0**	**11**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**6**	**0**	**0**	**0**		

Johns Creek

Stantec

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

SUMMARY QUANTITIES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
6-005

STATION	INSTL. NO.	HIGHWAY SIGNS CODE	TP 1 MAT'L REFL SHEETING TP 9 SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	TP2 MAT'L REFL SHEETING TP 9 SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	TP 1 MAT'L. REFL SHEETING TP 11 SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	POSTS TYPE 7 LENGTH (FT)	QTY.	TOTAL LENGTH (FT)	TYPE 8 LENGTH (FT)	QTY.	TOTAL LENGTH (FT)	BREAK AWAY EA
ABBOTTS BRIDGE ROAD																		
35+31 RT	1	M3-2(24)	24 X 12	1	2.0							13.00	1	13.0				
		M1-5(30)	30 X 24	1	5.0													
35+59 LT	2	R1-2(36)							36 TRI	1	3.5	13.00	1	13.0				
35+60 M	3	R4-7	24 X 30	1	5.0							12.50	1	12.5				
35+73 RT	4	R5-1(30)							30 x 30	1	6.3	12.50	1	12.5				
35+84 LT	5	R-560-5 (24)	24 X 30	1	5.0							12.50	1	12.5				
36+14 RT	6	R3-4(36)	36 X 36	1	9.0							13.00	1	13.0				
36+50 LT	7	R3-17	24 X 18	1	3.0							12.50	1	12.5				
		R3-17bP(24)	24 X 8	1	1.3									0.0				
36+70 RT	8	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
36+72 M	9	R6-2R	30 X 36	1	7.5							13.00	1	13.0				
37+40 RT	10	W3-3(36)							36 X 36	1	9.0	14.00	2	28.0				
		W16-8(42)							42 X 12	1	3.5			0.0				
37+90 RT	11	I-8	24 X 24	1	4.0							12.00	1	12.0				
38+37 LT	12	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
38+71 LT	13	R5-2A(24)	24 X 18	1	3.0							12.00	1	12.0				
38+80 RT	14	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
39+09 RT	15	R2-1(30)	30 X 36	1	7.5							13.00	1	13.0				
39+48 LT	16	W3-3(36)							36 X 36	1	9.0	14.50	2	29.0				
		W16-8(48)							48 X 24	1	8.0			0.0				
39+75 RT	17	R3-7R(36)	36 X 36	1	9.0							13.00	1	13.0				
40+25 LT	18	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
40+26 RT	19	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
		R3-17aP(24)	24 X 8	1	1.3									0.0				
40+40 LT	20	R1-2(36)							36 TRI	1	3.5	13.00	1	13.0				
40+73 LT	21	R-560-5 (24)	24 X 30	1	5.0							12.50	1	12.5				
40+80 RT	22	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
41+90 LT	23	I-8	24 X 24	1	4.0							12.00	1	12.0				
42+00 RT	24	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
42+36 LT	25	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
43+28 RT	26	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
44+25 RT	27	W2-2L(36)							36 X 36	1	9.0	13.50	2	27.0				
		W16-8(36)							36 X 12	1	3.0			0.0				
44+36 LT	28	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
44+50 LT	29	R4-4	36 X 30	1	7.5							12.50	1	12.5				
45+35 RT	30	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
45+50 LT	31	W3-3(36)							36 X 36	1	9.0	13.50	2	27.0				
		W16-8(42)							42 X 12	1	3.5			0.0				
46+00 LT	32	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
TOTAL SHT 6-006					89			0			127			462			0	

Johns Creek

Stantec

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

SUMMARY QUANTITIES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
6-006

STATION	INSTL. NO.	HIGHWAY SIGNS										POSTS						BREAK AWAY
		CODE	TP 1 MAT'L REFL SHEETING TP 9			TP2 MAT'L REFL SHEETING TP 9			TP 1 MAT'L. REFL SHEETING TP 11			TYPE 7			TYPE 8			
			SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	LENGTH (FT)	QTY.	TOTAL LENGTH (FT)	LENGTH (FT)	QTY.	TOTAL LENGTH (FT)	EA
47+23 LT	33	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
48+92 LT	34	R4-4A	36 X 30	1	7.5							12.50	1	12.5				
49+23 LT	35	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
50+00 LT	36	W2-2R(36)							36 X 36	1	9.0	13.50	2	27.0				
		W16-8(36)							36 X 12	1	3.0			0.0				
50+89 M	37	R4-7	24 X 30	1	5.0										13.00	1	13.0	
		R3-9cP	30 X 1	1	0.2													
		R3-9b	24 X 36	1	6.0													
50+96 RT	38	W552-4(36)							36 X 36	1	9.0				15.50	2	31.0	
		W16-8AP(60)							60 X 36	1	15.0			0.0				
53+50 RT	39	R4-4	36 X 30	1	7.5							12.50	1	12.5				
54+31 LT	40	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
56+00 LT	41	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
56+21 LT	42	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
56+77 RT	43	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
57+03 RT	44	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
59+76 LT	45	R4-4	36 X 30	1	7.5							12.50	1	12.5				
60+13 M	46	R4-7	24 X 30	1	5.0										13.00	1	13.0	
		R3-9cP	30 X 1	1	0.2													
		R3-9b	24 X 36	1	6.0													
61+00 LT	47	W552-3(36)							36 X 36	2	9.0				15.50	2	31.0	
		W16-8a(60)							60 X 36	3	15.0							
61+75 RT	48	W2-1(36)							36 X 36	1	9.0	13.50	2	27.0				
		W16-8(36)							36 X 12	1	3.0							
62+37 RT	49	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
64+33 RT	50	R560-5	24 X 30	1	5.0							12.50	1	12.5				
64+37 RT	51	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
65+03 LT	52	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
65+42 RT	53	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
		R6-3	24 X 30	1	5.0													
65+66 M	54	R3-4(30)	30 X 30	1	6.3							12.50	1	12.5				
66+00 LT	55	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
66+42 RT	56	W2-2L(36)							36 X 36	1	9.0	13.50	2	27.0				
		W16-8(42)							42 X 12	1	3.5							
66+75 RT	57	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
67+70 RT	58	R2-1(30)	30 X 36	1	7.5							13.00	1	13.0				
68+00 LT	59	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
68+10 LT	60	W2-1(36)							36 X 36	1	9.0	13.00	2	26.0				
		W16-8(36)							36 X 12	1	3.0							
68+45 LT	61	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
TOTAL SHT 6-007					78			0			177			369			88	

Johns Creek

Stantec

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

SUMMARY QUANTITIES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
6-007

STATION	INSTL. NO.	HIGHWAY SIGNS										POSTS						BREAK AWAY
		CODE	TP 1 MAT'L REFL SHEETING TP 9			TP2 MAT'L REFL SHEETING TP 9			TP 1 MAT'L. REFL SHEETING TP 11			TYPE 7			TYPE 8			
			SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	LENGTH (FT)	QTY.	TOTAL LENGTH (FT)	LENGTH (FT)	QTY.	TOTAL LENGTH (FT)	EA
68+75 RT	62	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
69+00 LT	63	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
70+32 LT	64	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
72+00 RT	65	W2-2R(36)							36 X 36	1	9.0	13.50	2	27.0				
		W16-8(48)							48 X 12	1	4.0							
72+54 LT	66	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
72+54 LT		R4-4	36 X 30	1	7.5							12.50	1	12.5				
73+00 LT	67	W3-3(36)							36 X 36	1	9.0	13.50	2	27.0				
		W16-8(42)							42 X 12	1	3.5							
73+73 RT	68	R4-4	36 X 30	1	7.5							12.50	1	12.5				
73+73 RT		R5-1A(36)							36 X 24	1	6.0							
75+75 RT	69	R8-3	24 X 24	1	4.0							12.00	1	12.0				
75+83 RT	70	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
77+08 RT	71	R1-1(36)							36 OCT	1	7.5	13.00	1	13.0				
77+45 LT	72	R5-1(30)							30 X 30	1	6.3	12.50	1	12.5				
78+00 RT	73	W3-3(36)							36 X 36	1	9.0				14.50	2	29.0	
		W16-8(66)							66 X 24	1	11.0							
79+49 RT	74	R4-4	36 X 30	1	7.5							12.50	1	12.5				
79+45 LT	75	R5-1A(36)							36 X 24	1	6.0	12.00	1	12.0				
79+55 LT	76	M-SPECIAL #1	36 X 36	1	9.0							13.00	1	13.0				
80+93 M	77	R4-7	24 X 30	1	5.0							12.50	1	12.5				
81+25 LT	78	W2-2L(36)							36 X 36	1	9.0	13.50	2	27.0				
		W16-8A(48)							48 X 12	1	4.0							
82+00 LT	79	R2-1(30)	30 X 36	1	7.5							13.00	1	13.0				
83+15 RT	80	S1-1(36)							36 X 36	1	9.0	14.00	1	14.0				
		W16-9P(24)							24 X 12	1	2.0							
83+20 LT	81	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
83+50 RT	82	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
		R3-17aP(24)	24 X 8	1	1.3													
83+66 RT	83	R560-5	24 X 30	1	5.0							12.50	1	12.5				
85+45 LT	84	R3-17(24)	24 X 18	1	3.0							12.00	1	12.0				
		R3-17aP(24)	24 X 8	1	1.3													
ADDISON WAY																		
101+00 LT	85	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
ADDISON LN																		
111+20 LT	86	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
TOTAL SHT 6-008					65			0			141			357			29	

Johns Creek

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REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

SUMMARY QUANTITIES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 6-008

STATION	INSTL. NO.	HIGHWAY SIGNS										POSTS						BREAK AWAY
		CODE	TP 1 MAT'L REFL SHEETING TP 9			TP2 MAT'L REFL SHEETING TP 9			TP 1 MAT'L. REFL SHEETING TP 11			TYPE 7			TYPE 8			
			SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	SIZE (IN) (IN)	QTY.	TOTAL AREA (SF)	LENGTH (FT)	QTY.	TOTAL LENGTH (FT)	LENGTH (FT)	QTY.	TOTAL LENGTH (FT)	EA
DUNHILL PLACE DR																		
121+00 LT	87	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
N HILLBROOKE TRACE																		
131+00 RT	88	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
ABBOTTS WAY																		
141+11 LT	89	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
BYERS RD																		
150+93 RT	90	W14-1(30)							30 X 30	1	6.3	12.50	1	12.5				
151+00 LT	91	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
161+40 LT	92	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
WESTBURY LANE																		
171+00 LT	93	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
VIGNEAU DRIVE																		
181+00 LT	94	W11-1(30)							30 X 30	1	6.3	12.50	1	12.5				
OVERHEAD STREET SIGNS																		
SIGNAL #1		D3-1(1)				120 X 18	2	30.0										
SIGNAL #1		D3-1(2)				90 X 18	2	22.5										
SIGNAL #2		D3-1(1)				120 X 18	2	30.0										
SIGNAL #2		D3-1(3)				120 X 18	1	15.0										
SIGNAL #2		D3-1(4)				96 X 18	1	12.0										
SIGNAL #2		D3-1(5)				120 X 18	1	15.0										
SIGNAL #2		D3-1(6)				96 X 18	1	12.0										
TOTAL SHT 6-009					0			137			51			100			0	
TOTAL SHT 6-006					89			0			127			462			0	
TOTAL SHT 6-007					78			0			177			369			88	
TOTAL SHT 6-008					65			0			141			357			29	
TOTAL					**232**			**137**			**496**			**1288**			**117**	

Johns Creek

Stantec

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

SUMMARY QUANTITIES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
6-009

STRIPING QUANTITIES		
MATERIAL	UNIT	QUANTITY
THERMOPLASTIC SOLID TRAFFIC STRIPE, 5 IN, WHITE	LF	1180
THERMOPLASTIC SKIP TRAFFIC STRIPE, 5 IN, WHITE	GLF	1420
THERMOPLASTIC SOLID TRAFFIC STRIPE, 5 IN, YELLOW	LF	7380
THERMOPLASTIC SKIP TRAFFIC STRIPE, 5 IN, YELLOW	LF	1800
SOLID TRAFFIC STRIPE, 5 IN, WHITE	LF	990
SKIP TRAF STRIPE, 5 IN, WHITE	GLF	1850
SOLID TRAFFIC STRIPE, 6 IN, WHITE	LF	7350
SKIP TRAF STRIPE, 6 IN, WHITE	GLF	1890
THERMOPLASTIC SOLID TRAFFIC STRIPE, 8" WHITE	LF	5920
THERMOPLASTIC SOLID TRAFFIC STRIPE, 24" WHITE	LF	410
THERMOPLASTIC TRAF STRIPING, WHITE	SY	2281
THERMOPLASTIC TRAF STRIPING, YELLOW	SY	45
THERMOPLASTIC PAVEMENT MARKING, ARROW, TP 1	EA	4
THERMOPLASTIC PAVEMENT MARKING, ARROW, TP 2	EA	60
THERMOPLASTIC PAVEMENT MARKING, ARROW, TP 6	EA	3
PAVEMENT MARKING, SYMBOL, TP 4	EA	24
PAVEMENT MARKING, ARROW, TP 1	EA	24
RAISED PVMT MARKERS TP 1 (YELLOW)	EA	140
RAISED PVMT MARKERS TP 3 (CLEAR/RED)	EA	405

REMOVE AND RESET EXISTING OVERHEAD GUIDE SIGNS	
STA 37+70 R (SIGN E)	1 EA
STA 37+70 R (SIGN F)	1 EA
STA 37+70 R (SIGN G)	1 EA
TOTAL	3 EA

ATMS QUANTITIES		
MATERIAL	UNIT	QUANTITY
PULLBOX, PB-6	EA	16
PULLBOX, PB-7	EA	2
CONDUIT, NONMETL, TP 2, 2 IN	LF	22
CONDUIT, NONMETL, TP 3, 2 IN	LF	5102
DIRECTIONAL BORE, 3 IN	LF	5102
OUTSIDE PLANT FIBER OPTIC CABLE, LOOSE TUBE, SM, 72 FIBER	LF	7082
FIBER OPTIC CLOSURE, UNDERGROUND, 72 FIBER	EA	3
FIBER OPTIC CLOSURE, FDC PRE-TERMINATED, TYPE A, 4-FIBER	EA	2
FIBER OPTIC SPLICE, FUSION	EA	18
FIBER OPTIC PATCH CORD, SM	EA	12
FIELD SWITCH, TYPE C	EA	2
TESTING	LS	LUMP

SIGNAL QUANTITIES			
PAY ITEM	LIST OF MATERIALS	UNIT	QUANTITY
SIGNAL #1: SR 120/ABBOTTS BRIDGE ROAD @ ADDISON WAY			
647-1000	TRAFFIC SIGNAL INSTALLATION	LS	LS
682-6233	NON-METAL TYPE 3 CONDUIT, 2 IN	LF	80
682-9950	5' DIRECTIONAL BORE	LF	50
SIGNAL #2: SR 120/ABBOTTS BRIDGE ROAD @ PARSONS RD/LAUREL RIDGE DR			
647-1000	TRAFFIC SIGNAL INSTALLATION	LS	LS
682-6233	NON-METAL TYPE 3 CONDUIT, 2 IN	LF	140
682-9950	5' DIRECTIONAL BORE	LF	70

Johns Creek

Stantec

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

SUMMARY QUANTITIES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 6-010

DATE	ITEM NO.	AMENDMENT DATE	AMENDMENT NUMBER	DESCRIPTION	UNIT	ORIGINAL QUANTITY	REQUIRED BY AMENDMENT QUANTITY

Johns Creek

Stantec

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

QUANTITIES (AMENDMENT)

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 7-001

DATE	ITEM NO.	DESCRIPTION	UNIT	ORIGINAL QUANTITY	PREVIOUS QUANTITY	REQUIRED ON CONSTRUCTION QUANTITY

Johns Creek

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REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

QUANTITIES (CONSTRUCTION)

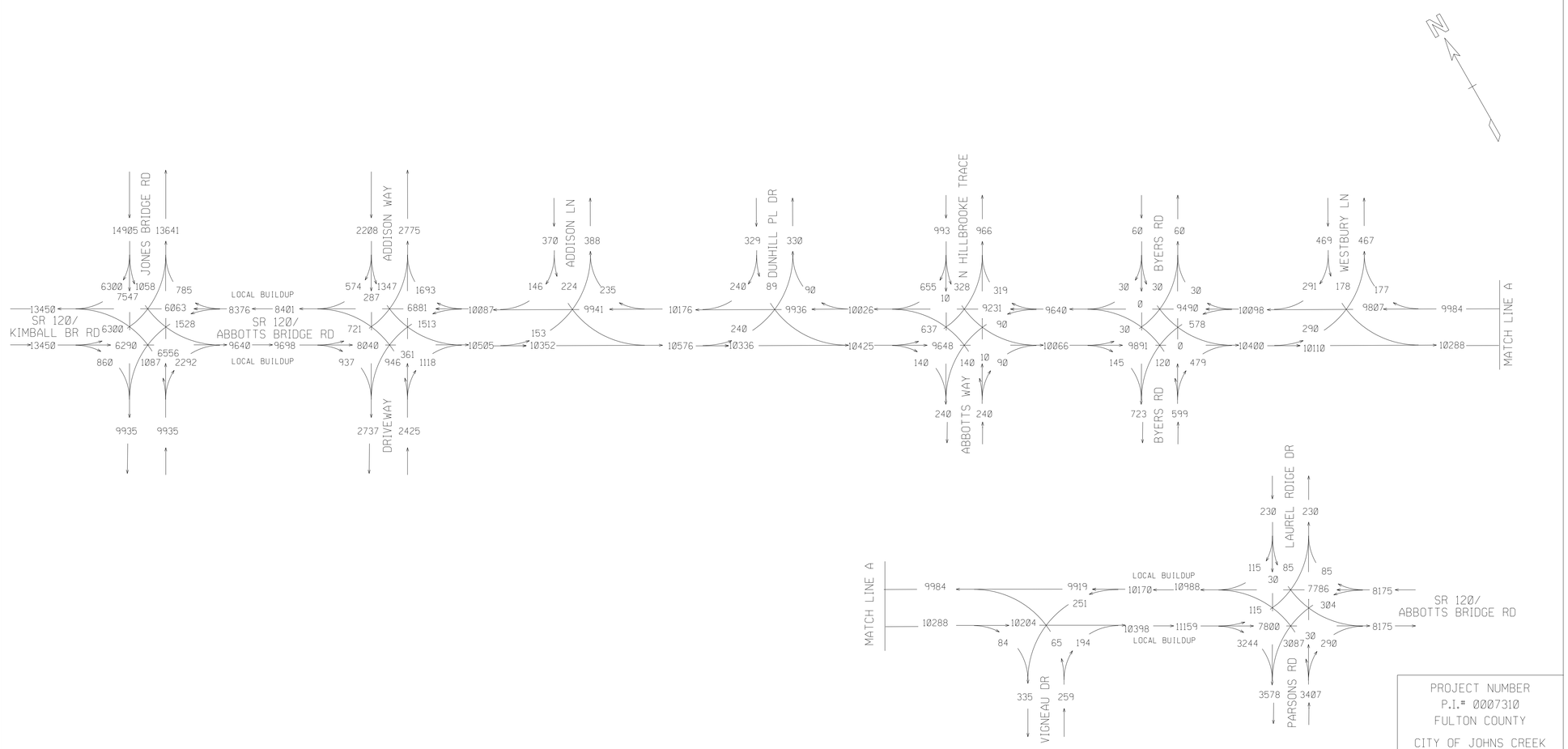
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
8-001

SHEET 1 OF 8

GEORGIA DEPARTMENT OF TRANSPORTATION
Office of Planning

FULTON COUNTY



PROJECT NUMBER
P.I.# 0007310
FULTON COUNTY

CITY OF JOHNS CREEK

SR 120/ABBOTTS BRIDGE ROAD
EXISTING DAILY
TRAFFIC VOLUMES
2013
24 HOUR TRUCKS = 4.6%
24 HOUR S.U. - 4.2%
24 HOUR COMB. =0.4%

RCP
07/2014

Stantec

Johns Creek

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REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

TRAFFIC DIAGRAM

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

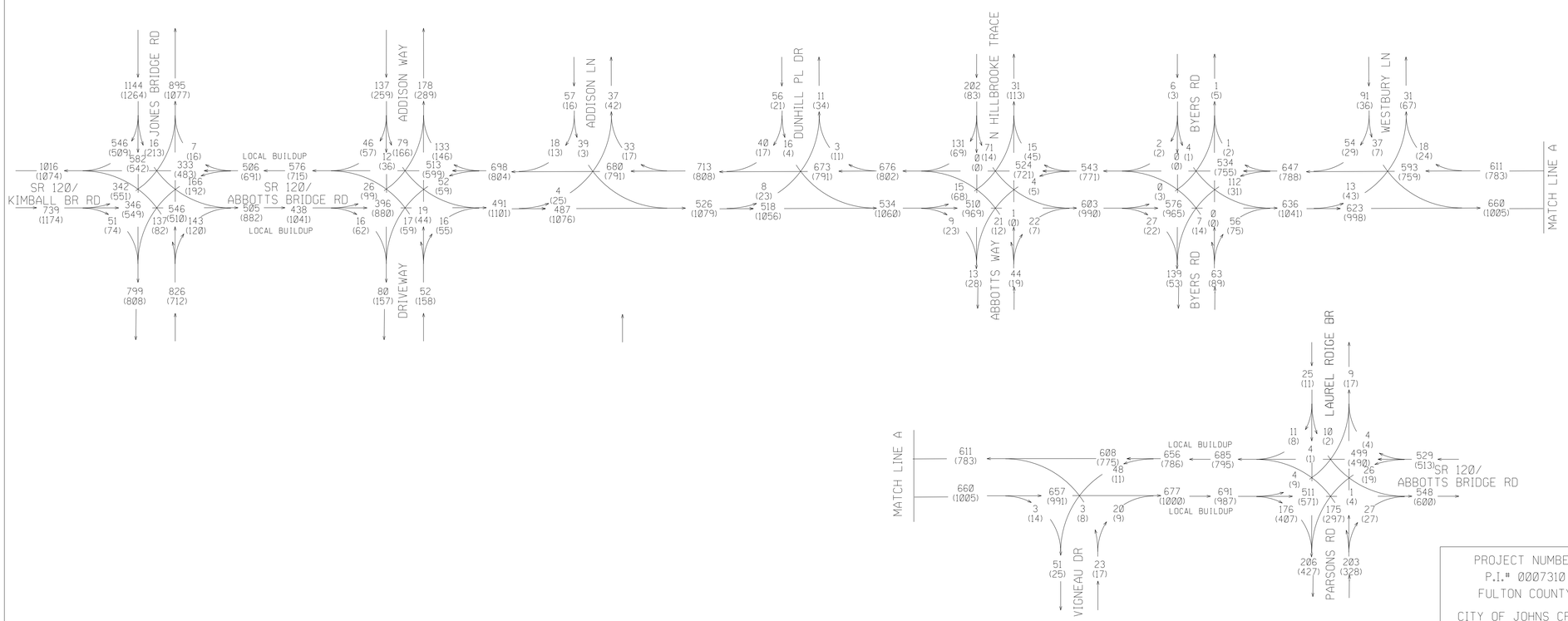
DRAWING No.
10-001

3/1/2007 GPLN

SHEET 2 OF 8

GEORGIA DEPARTMENT OF TRANSPORTATION
Office of Planning

FULTON COUNTY



PROJECT NUMBER
P.I.# 0007310
FULTON COUNTY

CITY OF JOHNS CREEK

SR 120/ABBOTTS BRIDGE ROAD
EXISTING PEAK HOUR
TRAFFIC VOLUMES
AM (PM)
2013
PEAK HR TRUCKS = 2.5%
PEAK HR S.U. - 2.2%
PEAK HR COMB. =0.3%

RCP
07/2014

Stantec

Johns Creek

Stantec

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

TRAFFIC DIAGRAM

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

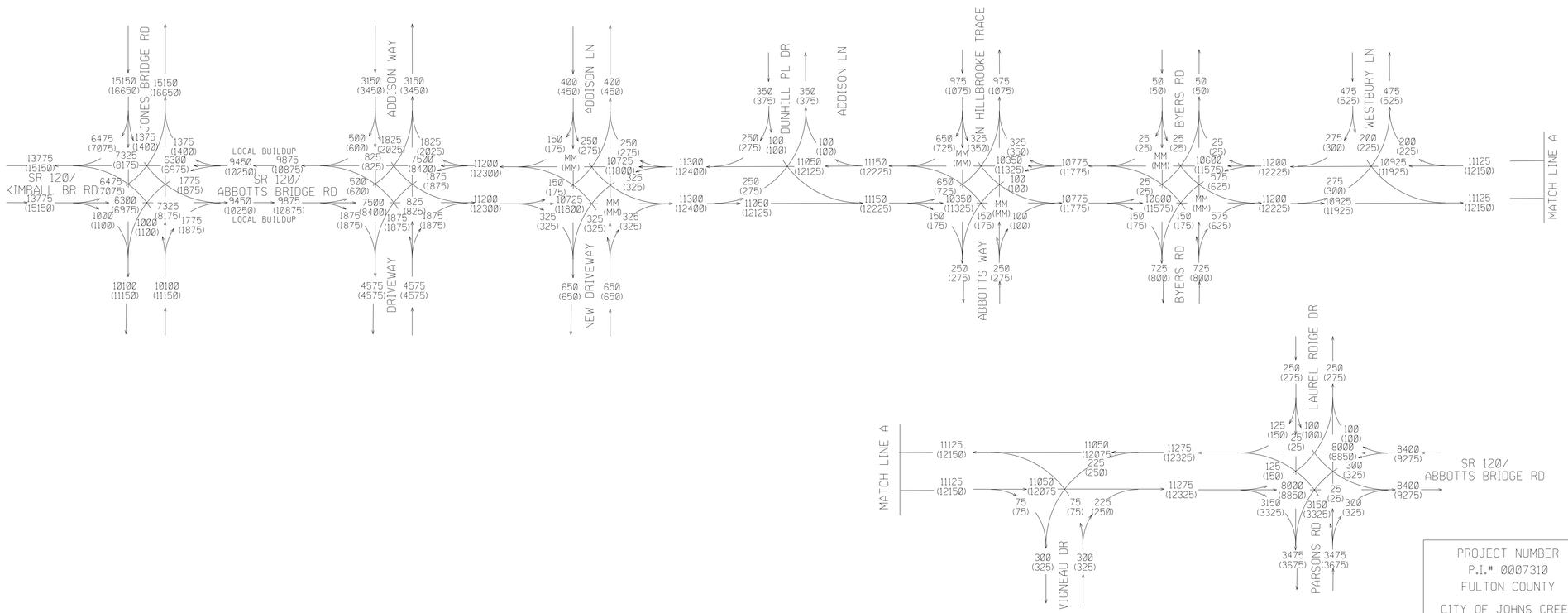
DRAWING No.
10-002

3/1/2007 GPLN

SHEET 6 OF 8

GEORGIA DEPARTMENT OF TRANSPORTATION
Office of Planning

FULTON COUNTY



PROJECT NUMBER
P.I.# 0007310
FULTON COUNTY

CITY OF JOHNS CREEK

SR 120/ABBOTTS BRIDGE ROAD
BUILD AADT
2017 (2037)

24 HOUR TRUCKS = 4.6%
24 HOUR S.U. - 4.2%
24 HOUR COMB. =0.4%

RCP
07/2014

Stantec

Johns Creek

Stantec

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

TRAFFIC DIAGRAM

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

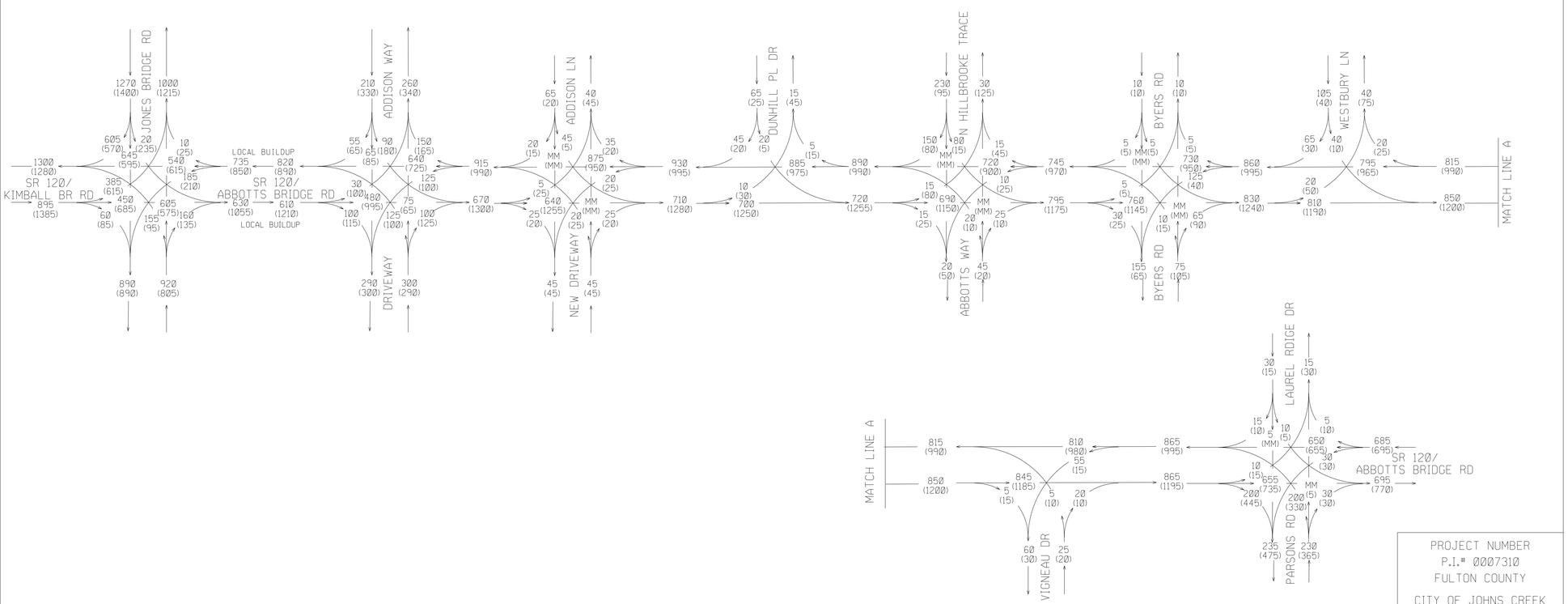
DRAWING No.
10-003

3/1/2007 GPLN

SHEET 8 OF 8

GEORGIA DEPARTMENT OF TRANSPORTATION
Office of Planning

FULTON COUNTY



PROJECT NUMBER
P.I.# 0007310
FULTON COUNTY

CITY OF JOHNS CREEK

SR 120/ABBOTTS BRIDGE ROAD
2037 BUILD DHV
AM (PM)

PEAK HR TRUCKS = 2.5%
PEAK HR S.U. - 2.2%
PEAK HR COMB. =0.3%

RCP
07/2014

Stantec

Johns Creek

Stantec

REVISION DATES		

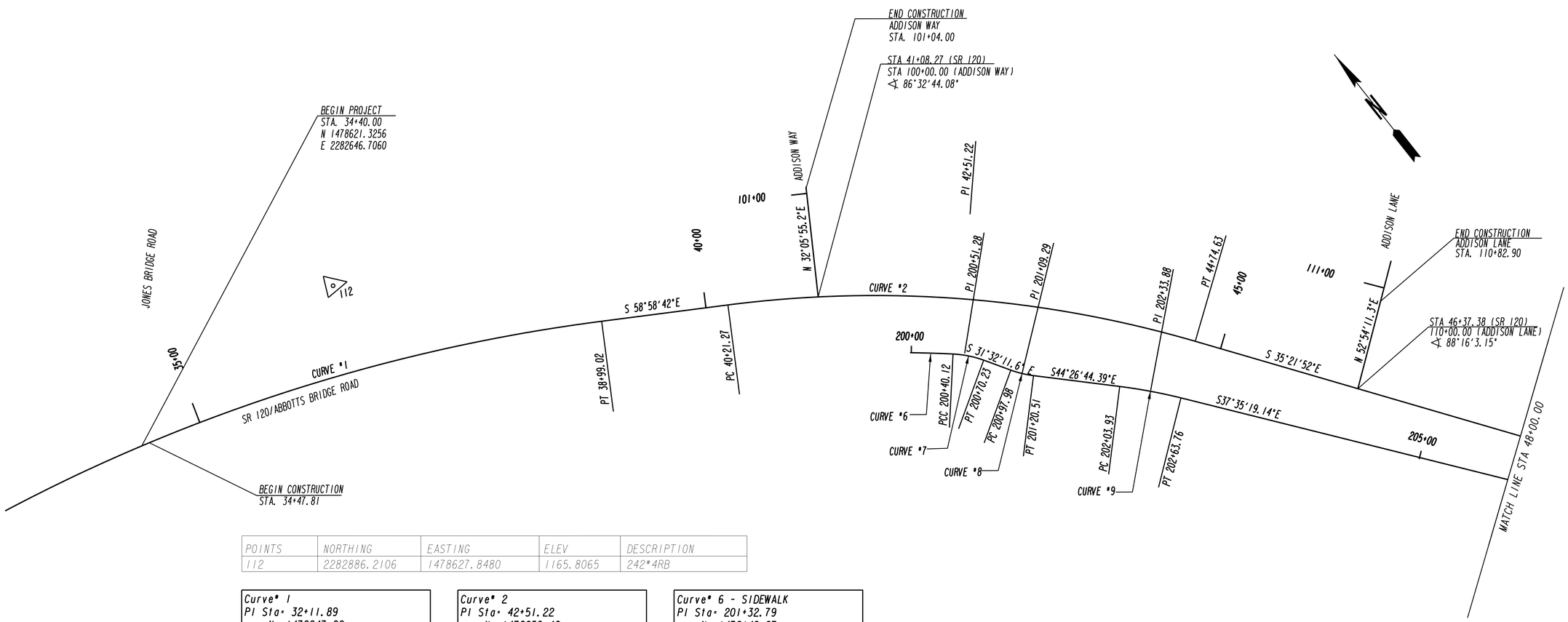
CITY OF JOHNS CREEK
PUBLIC WORKS

TRAFFIC DIAGRAM

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
10-004

3/1/2007 GPLN



POINTS	NORTHING	EASTING	ELEV	DESCRIPTION
112	2282886.2106	1478627.8480	1165.8065	242"4RB

Curve# 1
PI Sta= 32+11.89
N= 1478847.82
E= 2282390.66
DELTA= 50°12'56.9" (RT)
D= 03°24'02.38"
T= 789.52
L= 1476.65
R= 1684.84
E= 175.81
e = MATCH EXIST.

Curve# 2
PI Sta= 42+51.22
N= 1478259.42
E= 2283369.09
DELTA= 23°36'50.4" (RT)
D= 05°12'31.35"
T= 229.94
L= 453.36
R= 1100.00
E= 23.78
e = 3.8%

Curve# 6 - SIDEWALK
PI Sta= 201+32.79
N= 1478149.87
E= 2283383.91
DELTA= 14°27'10.2" (RT)
D= 05°28'15.73"
T= 132.79
L= 264.17
R= 1047.26
E= 8.39

Curve# 7 SIDEWALK
PI Sta= 200+51.28
N= 1478200.36
E= 2283321.45
DELTA= 19°30'41.6" (RT)
D= 05°28'15.73"(1)
D= 57°17'44.81"(2)
T= 52.47(1) T= 19.40(2)
L= 41.31(1) L= 30.11(2)
R= 1047.26(1) R= 100.00(2)
E= 1.31

Curve# 8 SIDEWALK
PI Sta= 201+09.29
N= 1478150.54
E= 2283352.02
DELTA= 12°54'32.8" (LT)
D= 57°17'44.81"
T= 11.31
L= 22.53
R= 100.00
E= 0.64

Curve# 9 SIDEWALK
PI Sta= 202+33.88
N= 1478061.52
E= 2283439.33
DELTA= 06°51'25.2" (RT)
D= 11°27'32.96"
T= 29.96
L= 59.84
R= 500.00
E= 0.90

Johns Creek

Stantec

SCALE IN FEET
0 50 100 200

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

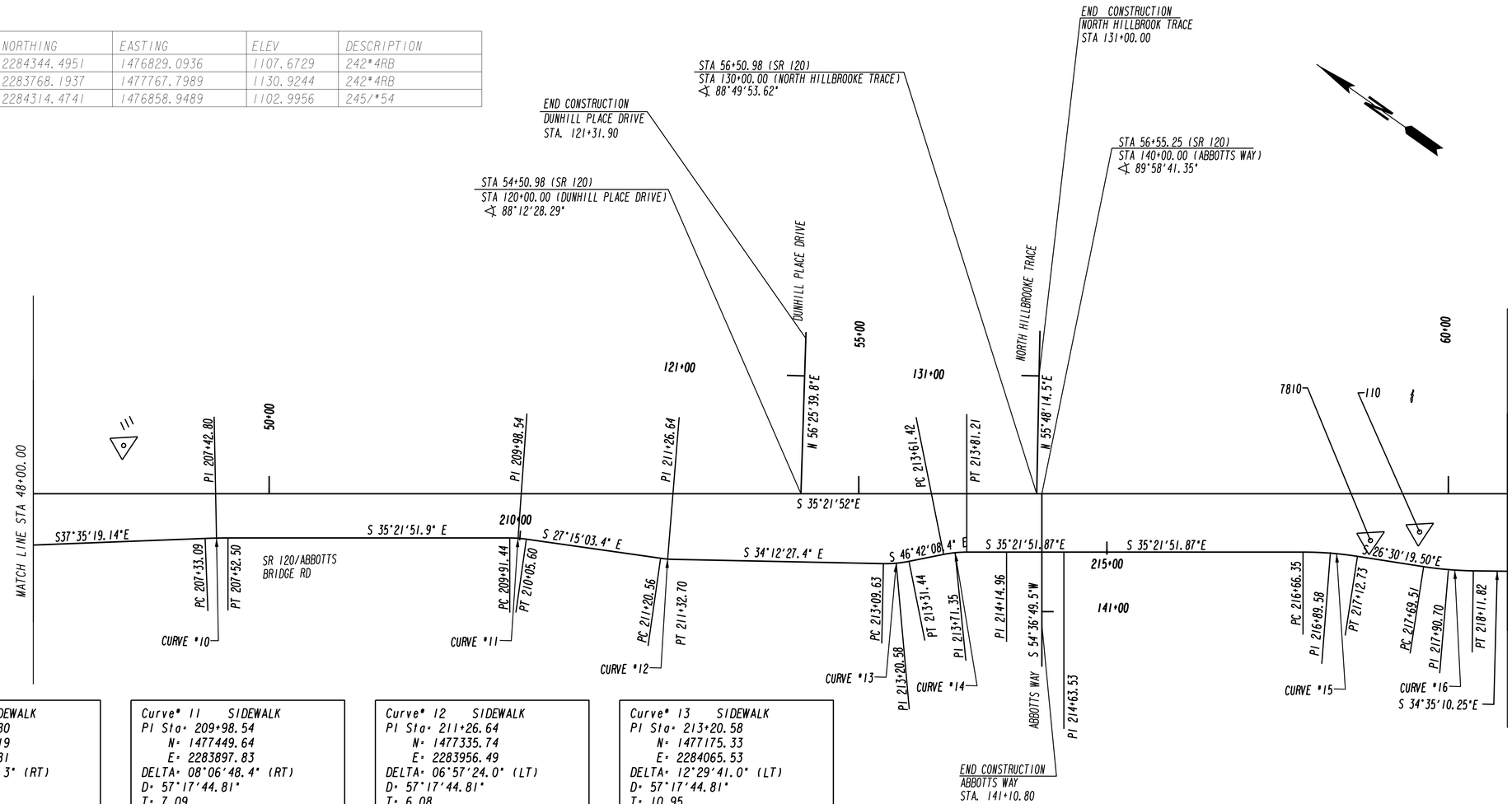
CONSTRUCTION LAYOUT

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
11-001

3/1/2007 GPLN

POINTS	NORTHING	EASTING	ELEV	DESCRIPTION
110	2284344.4951	1476829.0936	1107.6729	242*4RB
111	2283768.1937	1477767.7989	1130.9244	242*4RB
7810	2284314.4741	1476858.9489	1102.9956	245/*54



Curve# 10 SIDEWALK
PI Sta= 207+42.80
N= 1477658.19
E= 2283749.81
DELTA= 02°13'27.3" (RT)
D= 11°27'32.96"
T= 9.71
L= 19.41
R= 500.00
E= 0.09

Curve# 11 SIDEWALK
PI Sta= 209+98.54
N= 1477449.64
E= 2283897.83
DELTA= 08°06'48.4" (RT)
D= 57°17'44.81"
T= 7.09
L= 14.16
R= 100.00
E= 0.25

Curve# 12 SIDEWALK
PI Sta= 211+26.64
N= 1477335.74
E= 2283956.49
DELTA= 06°57'24.0" (LT)
D= 57°17'44.81"
T= 6.08
L= 12.14
R= 100.00
E= 0.18

Curve# 13 SIDEWALK
PI Sta= 213+20.58
N= 1477175.33
E= 2284065.53
DELTA= 12°29'41.0" (LT)
D= 57°17'44.81"
T= 10.95
L= 21.81
R= 100.00
E= 0.60

Curve# 14 SIDEWALK
PI Sta= 213+71.35
N= 1477140.46
E= 2284102.55
DELTA= 11°20'16.6" (RT)
D= 57°17'44.81"
T= 9.93
L= 19.79
R= 100.00
E= 0.49

Curve# 15 SIDEWALK
PI Sta= 216+89.58
N= 1476880.89
E= 2284286.77
DELTA= 08°51'32.4" (RT)
D= 19°05'54.94"
T= 23.24
L= 46.39
R= 300.00
E= 0.90

Curve# 16 SIDEWALK
PI Sta= 217+90.70
N= 1476790.32
E= 2284331.94
DELTA= 08°04'50.7" (LT)
D= 19°05'54.94"
T= 21.19
L= 42.31
R= 300.00
E= 0.75

Johns Creek

Stantec

SCALE IN FEET
0 50 100 200

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

CONSTRUCTION LAYOUT

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
11-002

3/1/2007 GPLN

POINTS	NORTHING	EASTING	ELEV	DESCRIPTION
109	2285078.4801	1476005.3854	1101.2177	242/*4RB

Curve* 3
PI Sta= 68+40.05
N= 1476142.94
E= 2284871.21
DELTA= 28°14'01.2" (LT)
D= 03°05'49.45"
T= 465.27
L= 911.63
R= 1850.00
E= 57.61
e= 3.0%

Curve* 5 - BYERS ROAD
PI Sta= 150+58.46
N= 1476442.61
E= 2284737.16
DELTA= 40°16'28.6" (RT)
D= 81°51'04.01"
T= 25.67
L= 49.20
R= 70.00
E= 4.56

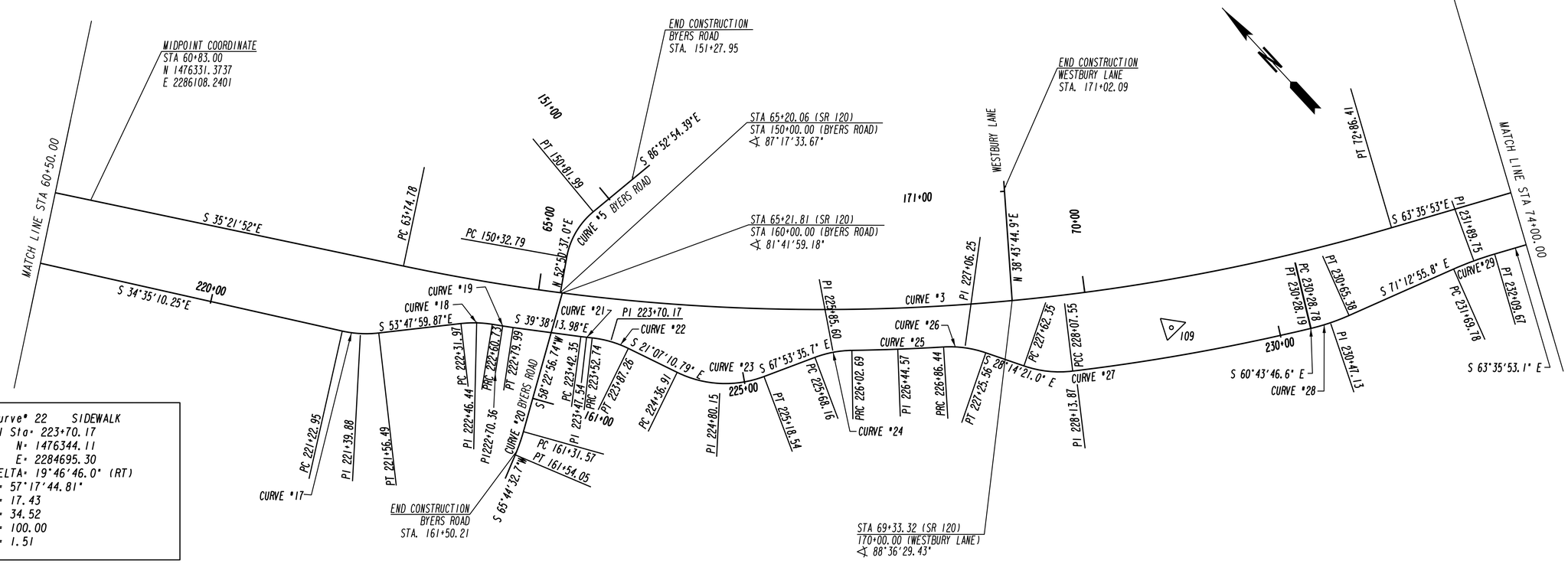
Curve* 17 SIDEWALK
PI Sta= 221+39.88
N= 1476502.79
E= 2284530.19
DELTA= 19°12'49.6" (LT)
D= 57°17'44.81"
T= 16.93
L= 33.53
R= 100.00
E= 1.42

Curve* 18 SIDEWALK
PI Sta= 222+46.44
N= 1476439.67
E= 2284616.43
DELTA= 15°41'38.5" (RT)
D= 54°34'02.67"
T= 14.47
L= 28.76
R= 105.00
E= 0.99

Curve* 19 SIDEWALK
PI Sta= 222+70.36
N= 1476420.70
E= 2284631.31
DELTA= 00°35'05.3" (LT)
D= 03°02'07.94"
T= 9.63
L= 19.27
R= 1887.50
E= 0.02

Curve* 20 - BYERS ROAD
PI Sta= 161+42.82
N= 1476331.09
E= 2284570.07
DELTA= 7°21'35.9" (RT)
D= 32°44'25.60"
T= 11.26
L= 22.48
R= 175.00
E= 0.36

Curve* 21 SIDEWALK
PI Sta= 223+47.54
N= 1476361.22
E= 2284680.49
DELTA= 0°18'55.5" (LT)
D= 3°02'07.94"
T= 5.20
L= 10.39
R= 1887.50
E= 0.01



Curve* 22 SIDEWALK
PI Sta= 223+70.17
N= 1476344.11
E= 2284695.30
DELTA= 19°46'46.0" (RT)
D= 57°17'44.81"
T= 17.43
L= 34.52
R= 100.00
E= 1.51

Curve* 23 SIDEWALK
PI Sta= 224+80.15
N= 1476241.19
E= 2284735.06
DELTA= 46°46'24.9" (LT)
D= 57°17'44.81"
T= 43.25
L= 81.64
R= 100.00
E= 8.95

Curve* 24 SIDEWALK
PI Sta= 225+85.60
N= 1476199.68
E= 2284837.25
DELTA= 19°47'09.1" (RT)
D= 57°17'44.81"
T= 17.44
L= 34.53
R= 100.00
E= 1.51

Curve* 25 SIDEWALK
PI Sta= 226+44.57
N= 1476160.07
E= 2284881.41
DELTA= 2°32'32.5" (LT)
D= 3°02'07.94"
T= 41.88
L= 83.75
R= 1887.50
E= 0.46

Curve* 26 SIDEWALK
PI Sta= 227+06.25
N= 1476120.95
E= 2284929.12
DELTA= 22°24'38.2" (RT)
D= 57°17'44.81"
T= 19.81
L= 39.11
R= 100.00
E= 1.94

Curve* 27 SIDEWALK
PI Sta= 228+13.87
N= 1476025.70
E= 2284980.27
DELTA= 32°29'25.6" (LT)
D= 57°17'44.81"(1) D= 2°59'19.77"(2)
T= 51.52(1) T= 218.93(2)
L= 45.20(1) L= 220.64(2)
R= 100.00(1) R= 1917.00(2)
E= 12.49

Curve* 28 SIDEWALK
PI Sta= 230+47.13
N= 1475909.40
E= 2285187.77
DELTA= 10°29'09.2" (LT)
D= 28°38'52.40"
T= 18.35
L= 36.60
R= 200.00
E= 0.84

Curve* 29 SIDEWALK
PI Sta= 231+89.75
N= 1475863.44
E= 2285322.90
DELTA= 07°37'02.7" (RT)
D= 19°05'54.90"
T= 19.97
L= 39.89
R= 300.00
E= 0.66

Johns Creek

Stantec

SCALE IN FEET
0 50 100 200

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

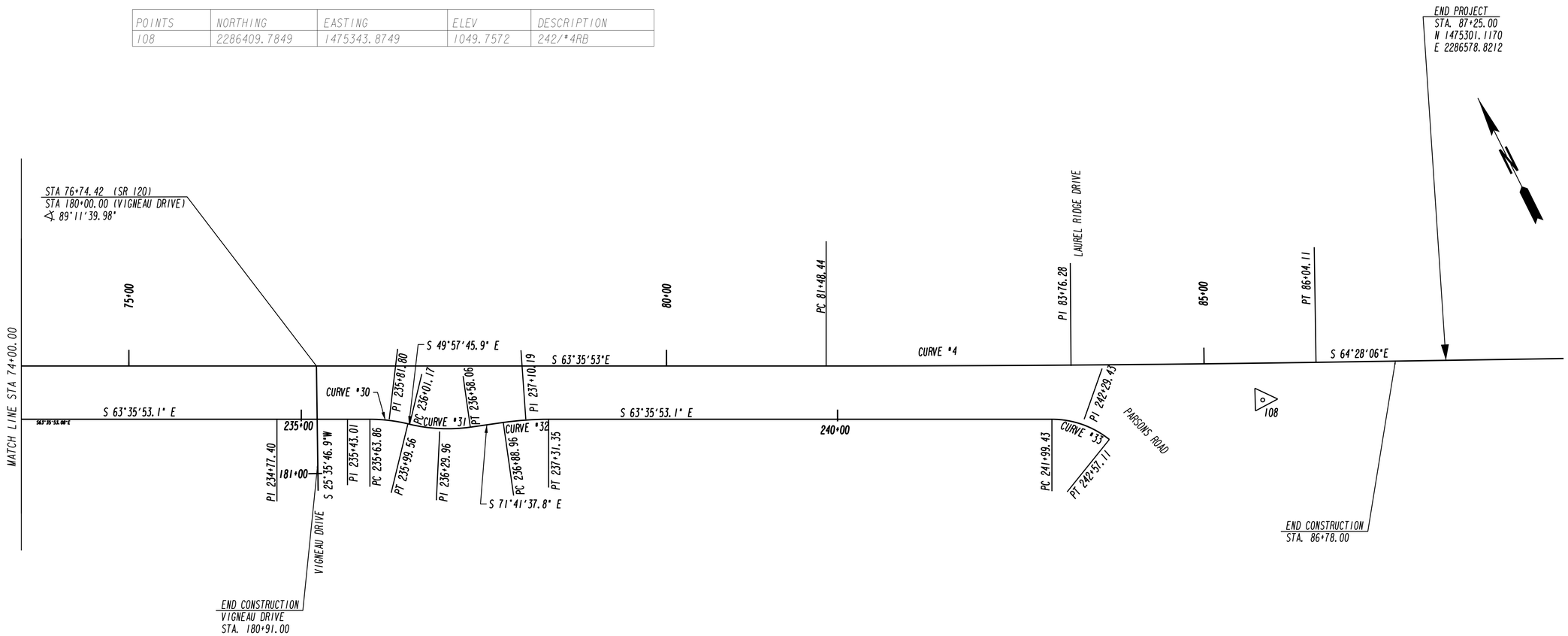
CONSTRUCTION LAYOUT

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
11-003

3/1/2007 GPLN

POINTS	NORTHING	EASTING	ELEV	DESCRIPTION
108	2286409.7849	1475343.8749	1049.7572	242/*4RB



Curve# 4
PI Sta= 83+76.28
N= 1475451.42
E= 2286264.15
DELTA= 00°52'12.9" (LT)
D= 00°11'27.55"
T= 227.84
L= 455.66
R= 30000.00
E= 0.87

Curve# 30 SIDEWALK
PI Sta= 235+81.80
N= 1475689.08
E= 2285674.10
DELTA= 13°38'07.2" (RT)
D= 38°11'49.87"
T= 17.93
L= 35.70
R= 150.00
E= 1.07

Curve# 31 SIDEWALK
PI Sta= 236+29.96
N= 1475657.99
E= 2285711.11
DELTA= 21°43'51.9" (LT)
D= 38°11'49.87"
T= 28.79
L= 56.89
R= 150.00
E= 2.74

Curve# 32 SIDEWALK
PI Sta= 237+10.19
N= 1475632.57
E= 2285787.93
DELTA= 08°05'44.7" (RT)
D= 19°05'54.94"
T= 21.23
L= 42.39
R= 300.00
E= 0.75

Curve# 33 SIDEWALK
PI Sta= 242+29.43
N= 1475401.65
E= 2286253.08
DELTA= 38°53'06.6" (RT)
D= 67°24'24.48"
T= 30.00
L= 57.69
R= 85.00
E= 5.14

Johns Creek

Stantec

SCALE IN FEET
0 50 100 200

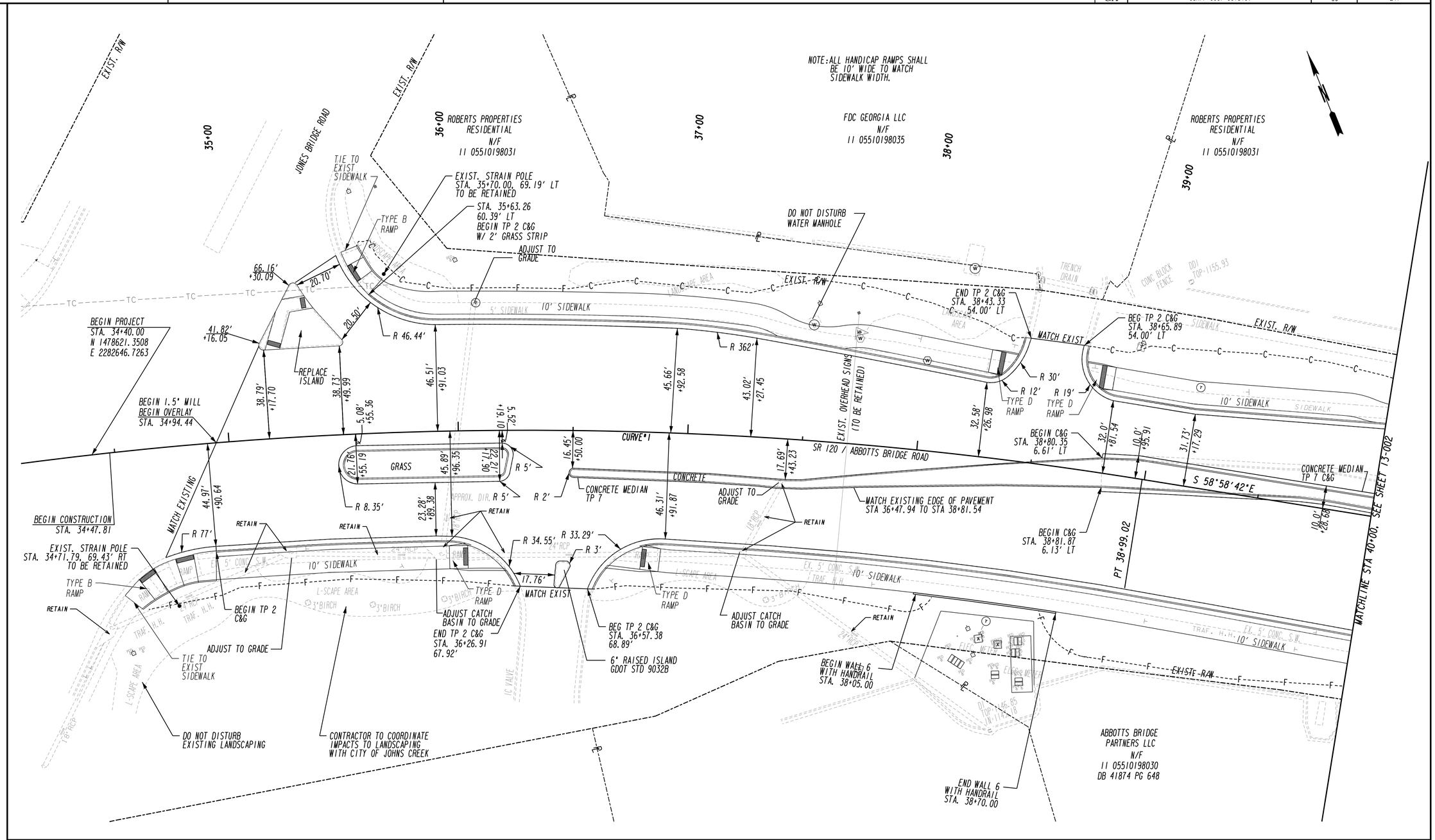
REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

CONSTRUCTION LAYOUT

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
11-004



PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	
ESMT FOR CONSTR & MAINT OF SLOPES	
ESMT FOR CONSTR OF SLOPES	
ESMT FOR CONSTR OF DRIVES	
MILL & OVERLAY CONSTRUCTION	
ESMT FOR CONSTR OF DRAINAGE	

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

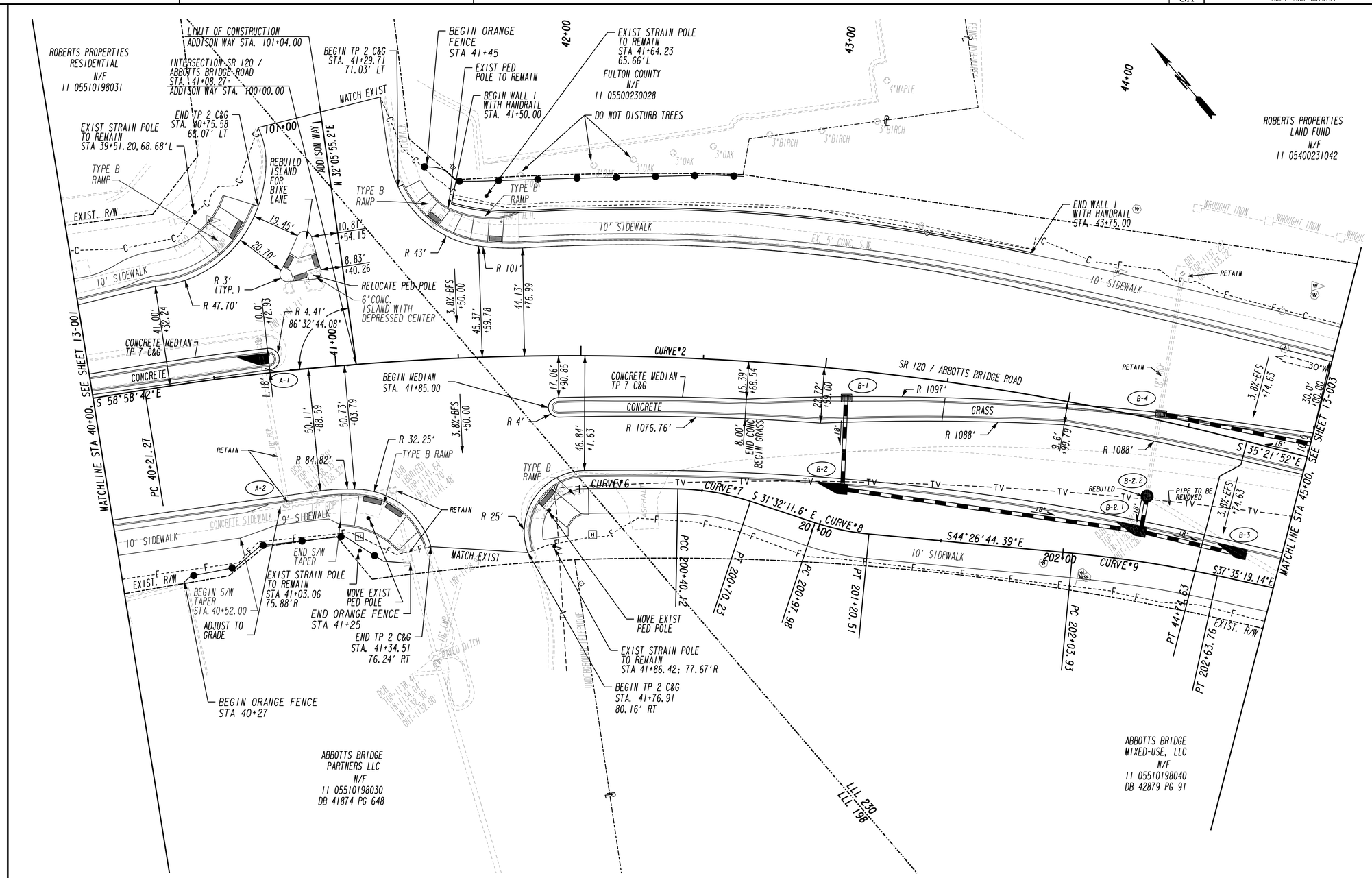
CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 13-001

3/1/2007 GPLN



PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	
ESMT FOR CONSTR & MAINT OF SLOPES	
ESMT FOR CONSTR OF SLOPES	
ESMT FOR CONSTR OF DRIVES	
MILL & OVERLAY CONSTRUCTION	
ESMT FOR CONSTR OF DRAINAGE	

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

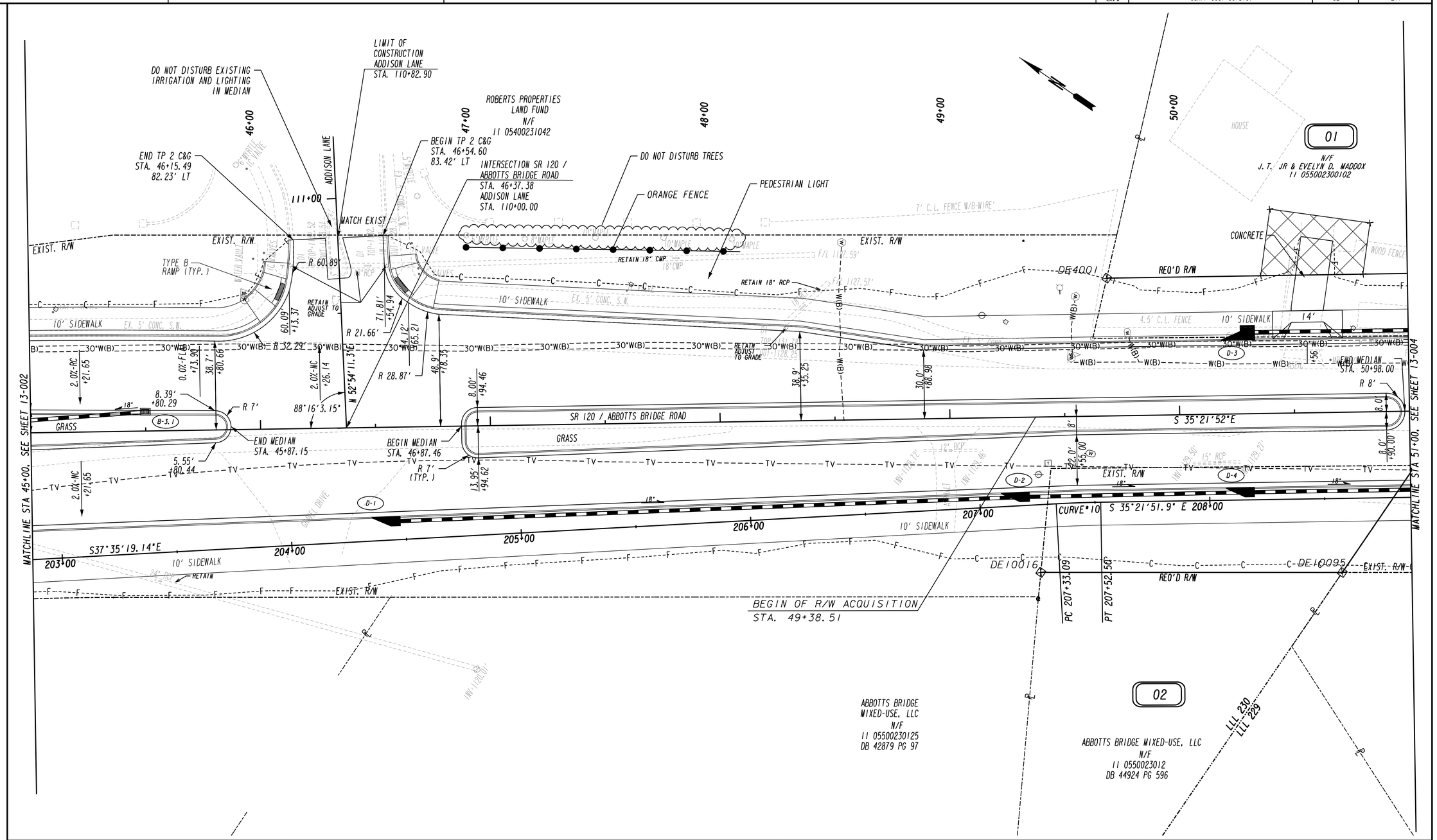
CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 13-002

3/1/2007 GPLN



PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	
ESMT FOR CONSTR & MAINT OF SLOPES	
ESMT FOR CONSTR OF SLOPES	
ESMT FOR CONSTR OF DRIVES	
MILL & OVERLAY CONSTRUCTION	
ESMT FOR CONSTR OF DRAINAGE	

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

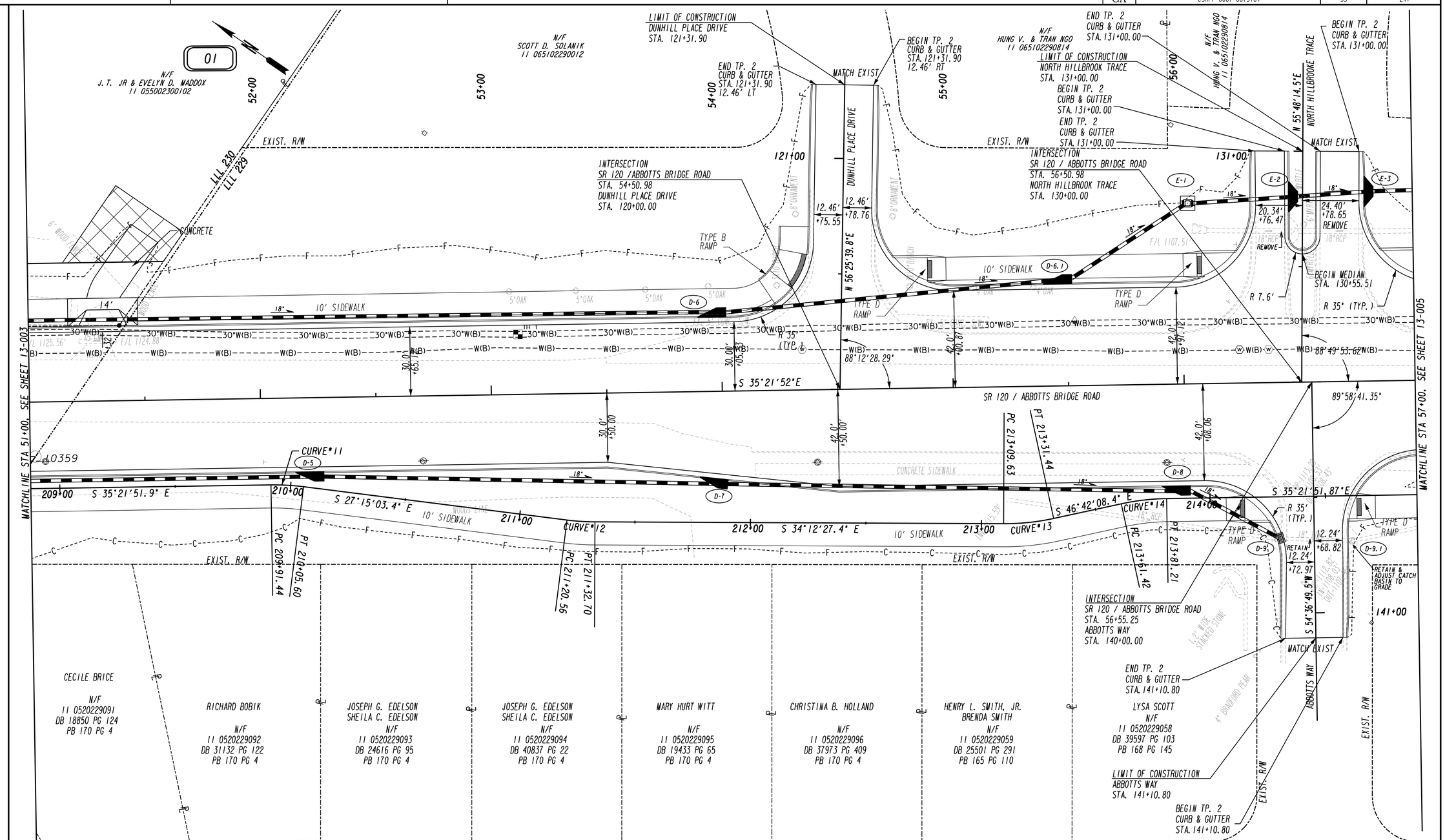
CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 13-003

3/11/2007 GPLN



PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	
ESMT FOR CONSTR & MAINT OF SLOPES	
ESMT FOR CONSTR OF SLOPES	
ESMT FOR CONSTR OF DRIVES	
MILL & OVERLAY CONSTRUCTION	
ESMT FOR CONSTR OF DRAINAGE	

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

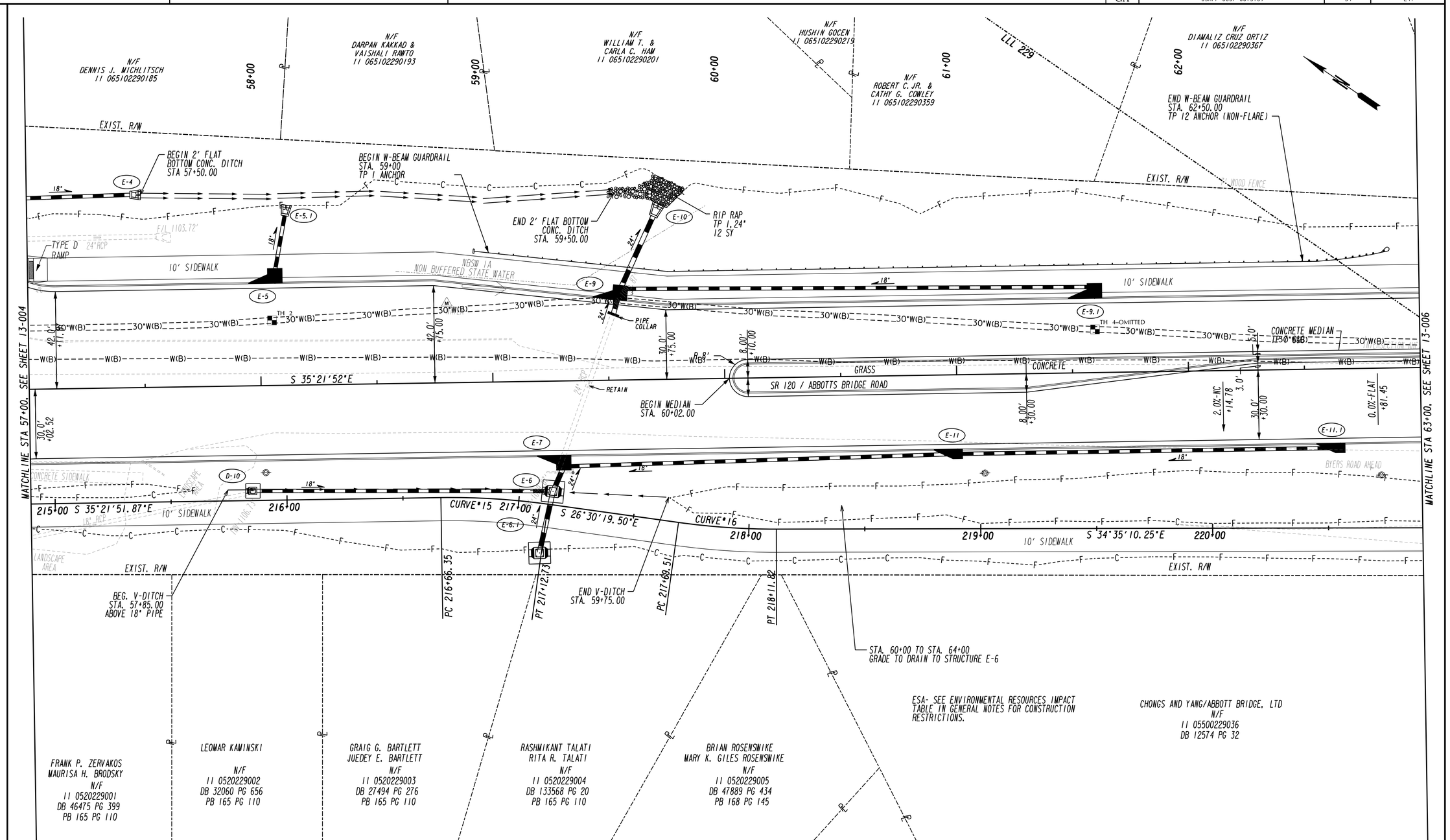
CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
13-004

3/1/2007 GPLN



PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	
ESMT FOR CONSTR & MAINT OF SLOPES	
ESMT FOR CONSTR OF SLOPES	
ESMT FOR CONSTR OF DRIVES	
MILL & OVERLAY CONSTRUCTION	
ESMT FOR CONSTR OF DRAINAGE	

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

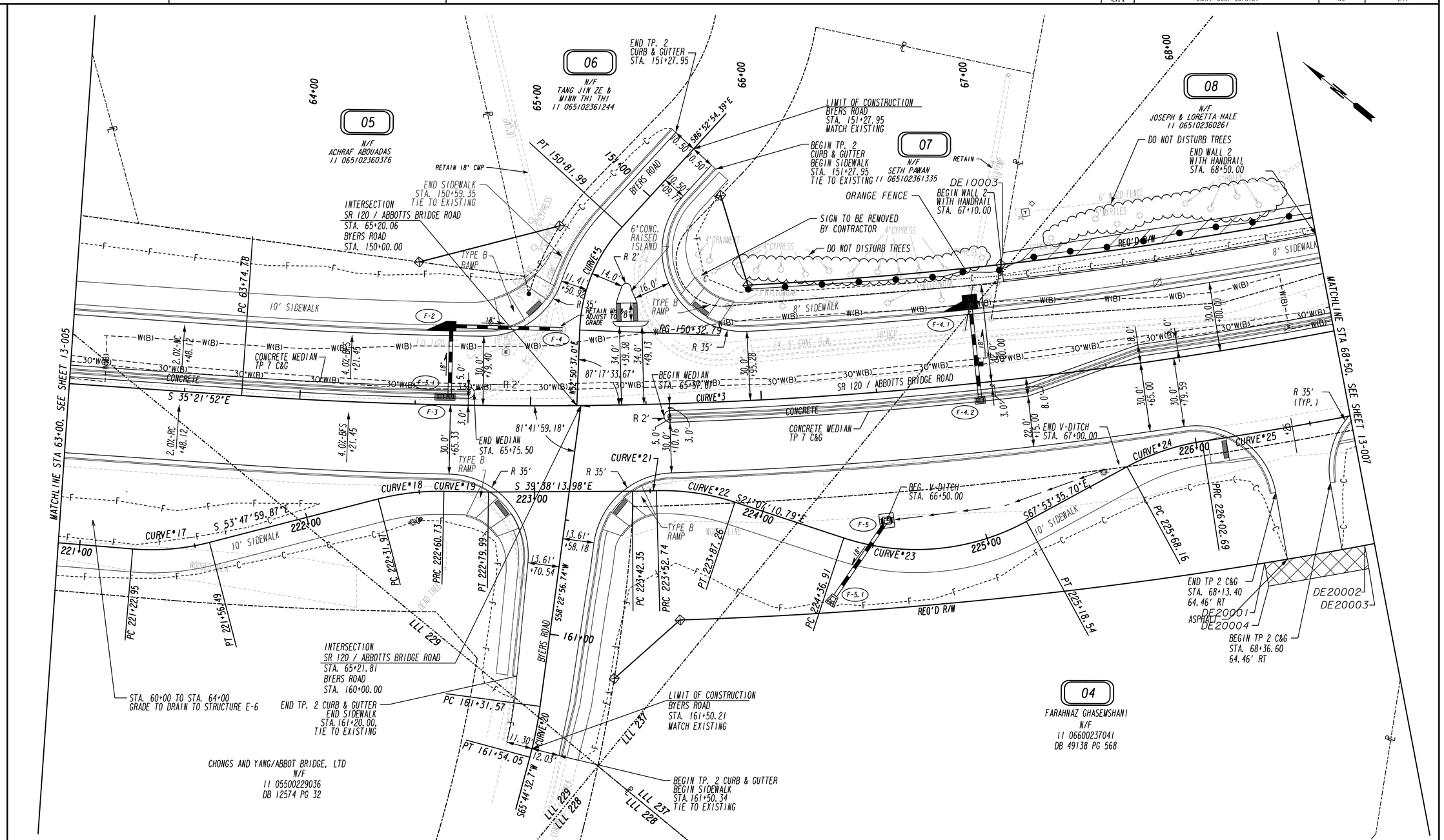
CITY OF JOHNS CREEK
PUBLIC WORKS

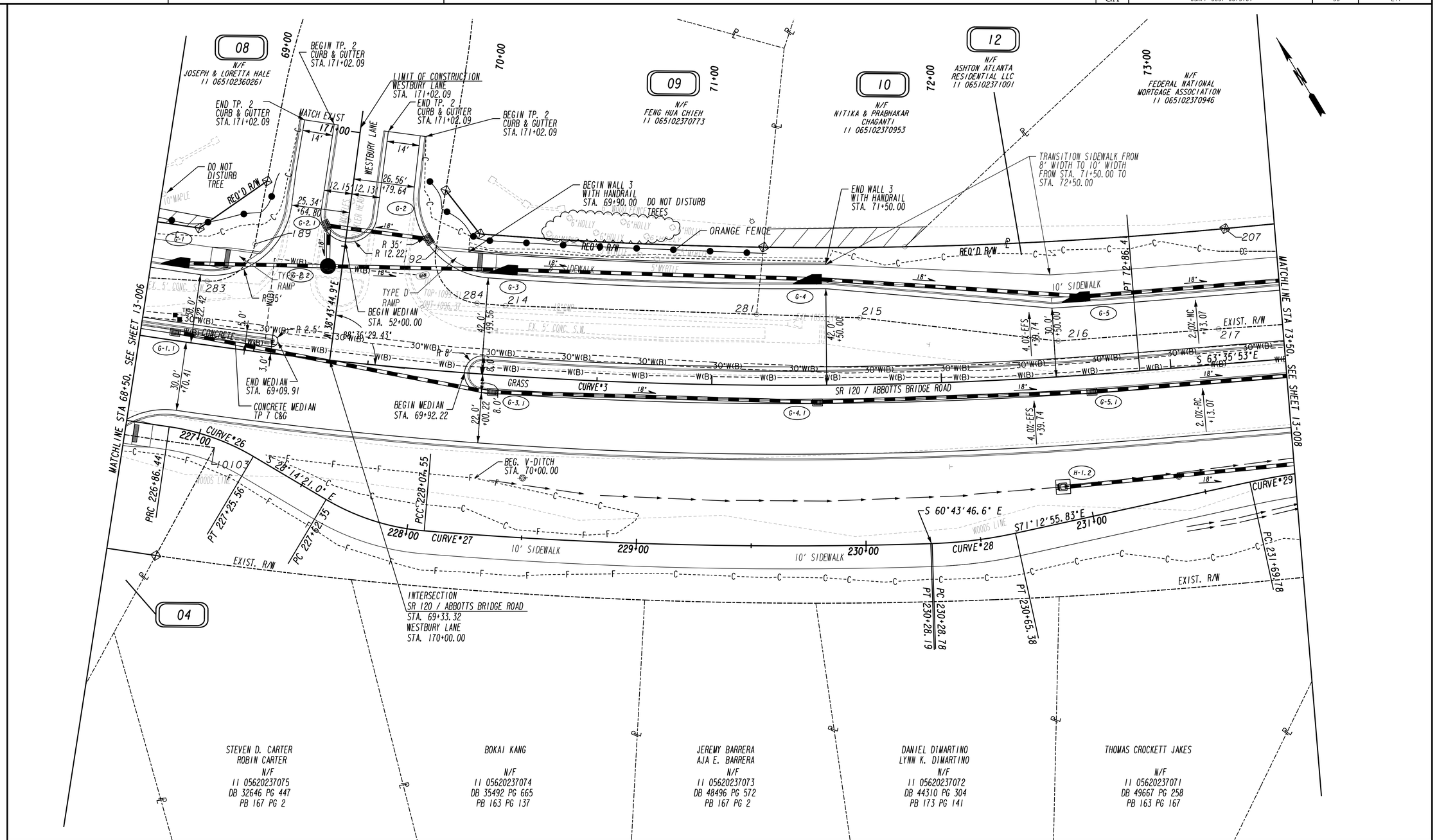
MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
13-005

3/1/2007 GPLN


05
N/F
ACHRAF ABOUADAS
11 065102360376
06
N/F
TANG JIN ZE &
MINN THI THI
11 065102361244
07
N/F
SETH PAWAN
11 065102361335
08
N/F
JOSEPH & LORETTA HALE
11 065102360261
04
FARAHNAZ GHASEMSHANI
N/F
11 06600237041
DB 49138 PG 568
CHONGS AND YANG/ABBOT BRIDGE, LTD
N/F
11 05500229036
DB 12574 PG 32
END TP. 2
CURB & GUTTER
STA. 151+27.95
LIMIT OF CONSTRUCTION
BYERS ROAD
STA. 151+27.95
MATCH EXISTING
BEGIN TP. 2
CURB & GUTTER
BEGIN SIDEWALK
STA. 151+27.95
TIE TO EXISTING
RETAIN 18" CMP
END SIDEWALK
STA. 150+59.35
TIE TO EXISTING
INTERSECTION
SR 120 / ABBOTTS BRIDGE ROAD
STA. 65+20.06
BYERS ROAD
STA. 150+00.00
SIGN TO BE REMOVED
BY CONTRACTOR
DO NOT DISTURB TREES
ORANGE FENCE
BEGIN WALL 2
WITH HANDRAIL
STA. 67+10.00
END WALL 2
WITH HANDRAIL
STA. 68+50.00
DE10003
REQ'D R/W
6" CONC.
RAISED
ISLAND
TYPE B
RAMP
10' SIDEWALK
8' SIDEWALK
CONCRETE MEDIAN
TP 7 C&G
BEGIN MEDIAN
STA. 65+39.87
END MEDIAN
STA. 65+75.50
SR 120 / ABBOTTS BRIDGE ROAD
MATCHLINE STA 63+00. SEE SHEET 13-005
MATCHLINE STA 68+50. SEE SHEET 13-007
END V-DITCH
STA. 67+00.00
BEG. V-DITCH
STA. 66+50.00
END TP 2 C&G
STA. 68+13.40
64.46' RT
BEGIN TP 2 C&G
STA. 68+36.60
64.46' RT
DE20002
DE20003
DE20001
DE20004
ASPHALT
INTERSECTION
SR 120 / ABBOTTS BRIDGE ROAD
STA. 65+21.81
BYERS ROAD
STA. 160+00.00
END TP. 2 CURB & GUTTER
END SIDEWALK
STA. 161+20.00
TIE TO EXISTING
STA. 60+00 TO STA. 64+00
GRADE TO DRAIN TO STRUCTURE E-6
LIMIT OF CONSTRUCTION
BYERS ROAD
STA. 161+50.21
MATCH EXISTING
BEGIN TP. 2 CURB & GUTTER
BEGIN SIDEWALK
STA. 161+50.34
TIE TO EXISTING
REQ'D R/W
CURVE*3
CURVE*17
CURVE*18
CURVE*19
CURVE*21
CURVE*22
CURVE*23
CURVE*24
CURVE*25
CURVE*20
PC 63+74.78
PT 150+81.99
PC 221+22.95
PT 221+56.49
PC 222+31.91
PRC 222+60.73
PT 222+79.99
PC 223+42.35
PRC 223+52.74
PT 223+87.26
PC 224+36.91
PT 225+18.54
PC 225+68.16
PRC 226+02.69
PC 161+31.57
PT 161+54.05
LLL 229
LLL 228
LLL 237
BYERS ROAD
S 35°21'52"E
S 53°47'59.87"E
S 39°38'13.98"E
S 21°07'10.79"E
S 67°53'35.70"E
S 86°52'54.39"E
S 58°22'56.74"W
S 65°44'32.7"W
87°17'33.67"
81°41'59.18"
N 42°50'37.0"E
PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
ESMT FOR CONSTR & MAINT OF SLOPES
ESMT FOR CONSTR OF SLOPES
ESMT FOR CONSTR OF DRIVES
MILL & OVERLAY CONSTRUCTION
ESMT FOR CONSTR OF DRAINAGE
Johns Creek
Stantec
SCALE IN FEET
0 20 40 80
REVISION DATES
CITY OF JOHNS CREEK
PUBLIC WORKS
MAINLINE PLAN
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310)
06/17/2015
DRAWING No.
13-006
3/1/2007 GPLN



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
ESMT FOR CONSTR & MAINT OF SLOPES
ESMT FOR CONSTR OF SLOPES
ESMT FOR CONSTR OF DRIVES
MILL & OVERLAY CONSTRUCTION
ESMT FOR CONSTR OF DRAINAGE

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

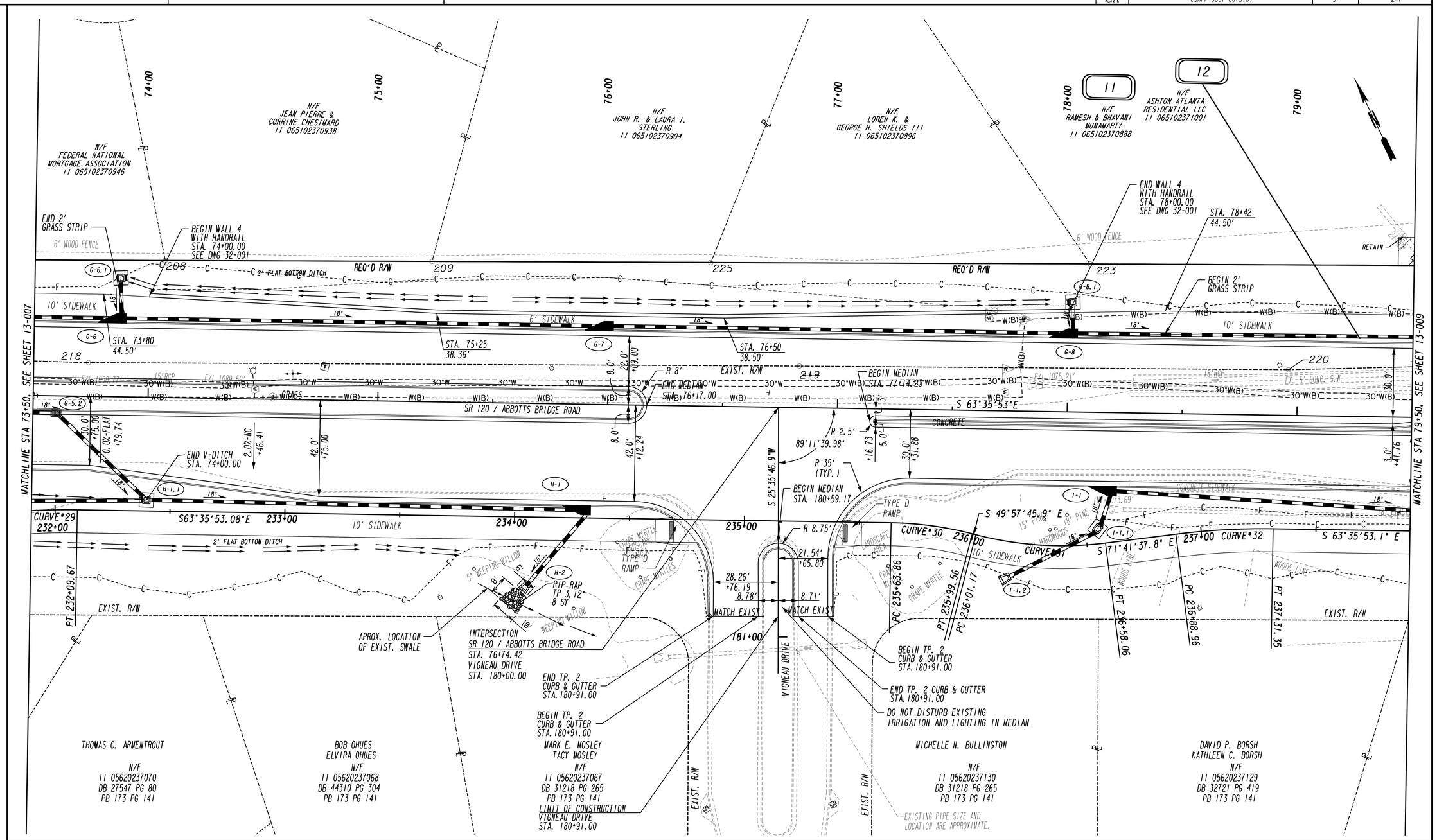
CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
13-007

3/1/2007 GPLN



PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	
ESMT FOR CONSTR & MAINT OF SLOPES	
ESMT FOR CONSTR OF SLOPES	
ESMT FOR CONSTR OF DRIVES	
MILL & OVERLAY CONSTRUCTION	
ESMT FOR CONSTR OF DRAINAGE	

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

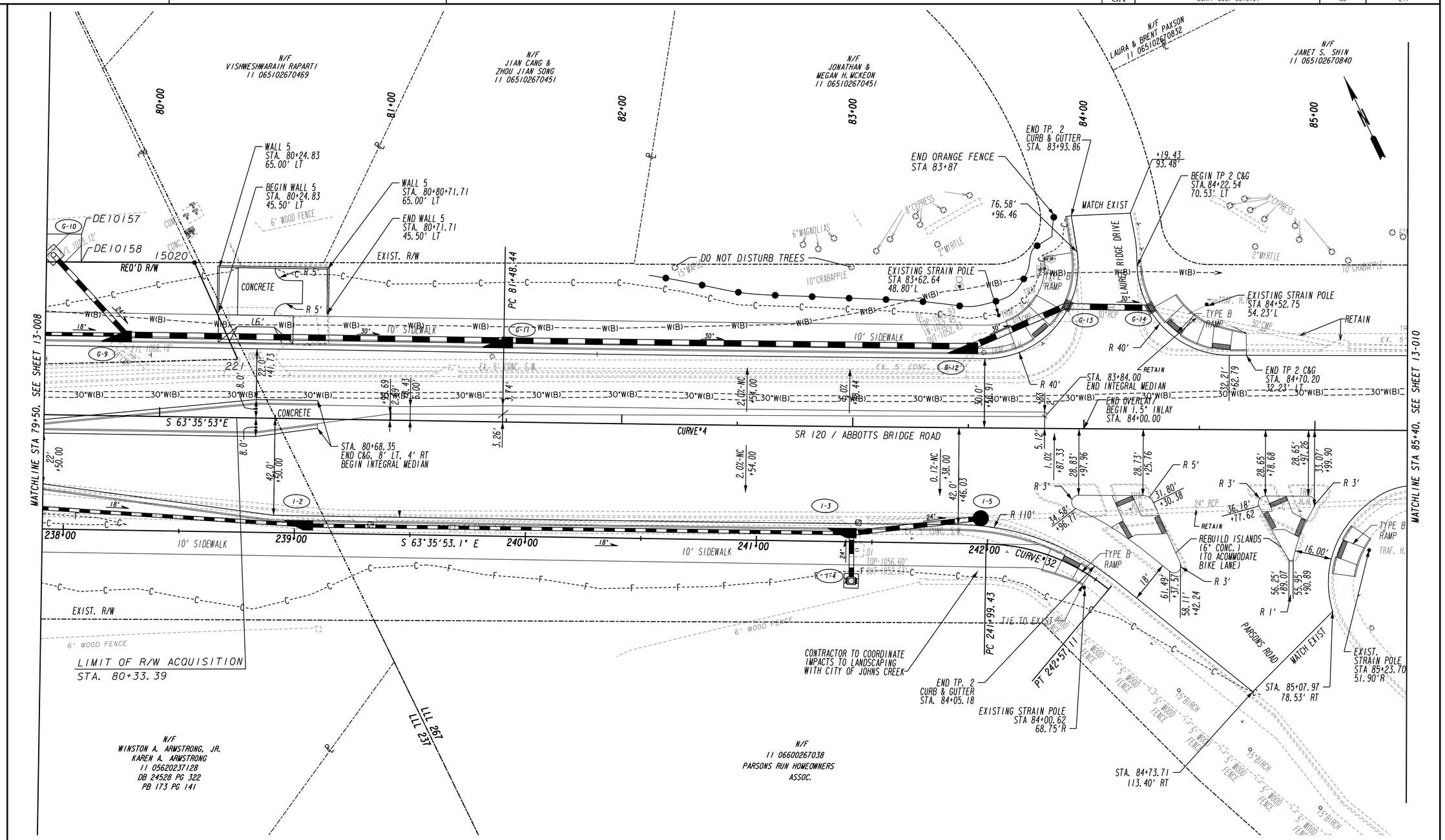
CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
13-008

3/1/2007 GPLN



PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	
ESMT FOR CONSTR & MAINT OF SLOPES	
ESMT FOR CONSTR OF SLOPES	
ESMT FOR CONSTR OF DRIVES	
MILL & OVERLAY CONSTRUCTION	
ESMT FOR CONSTR OF DRAINAGE	

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

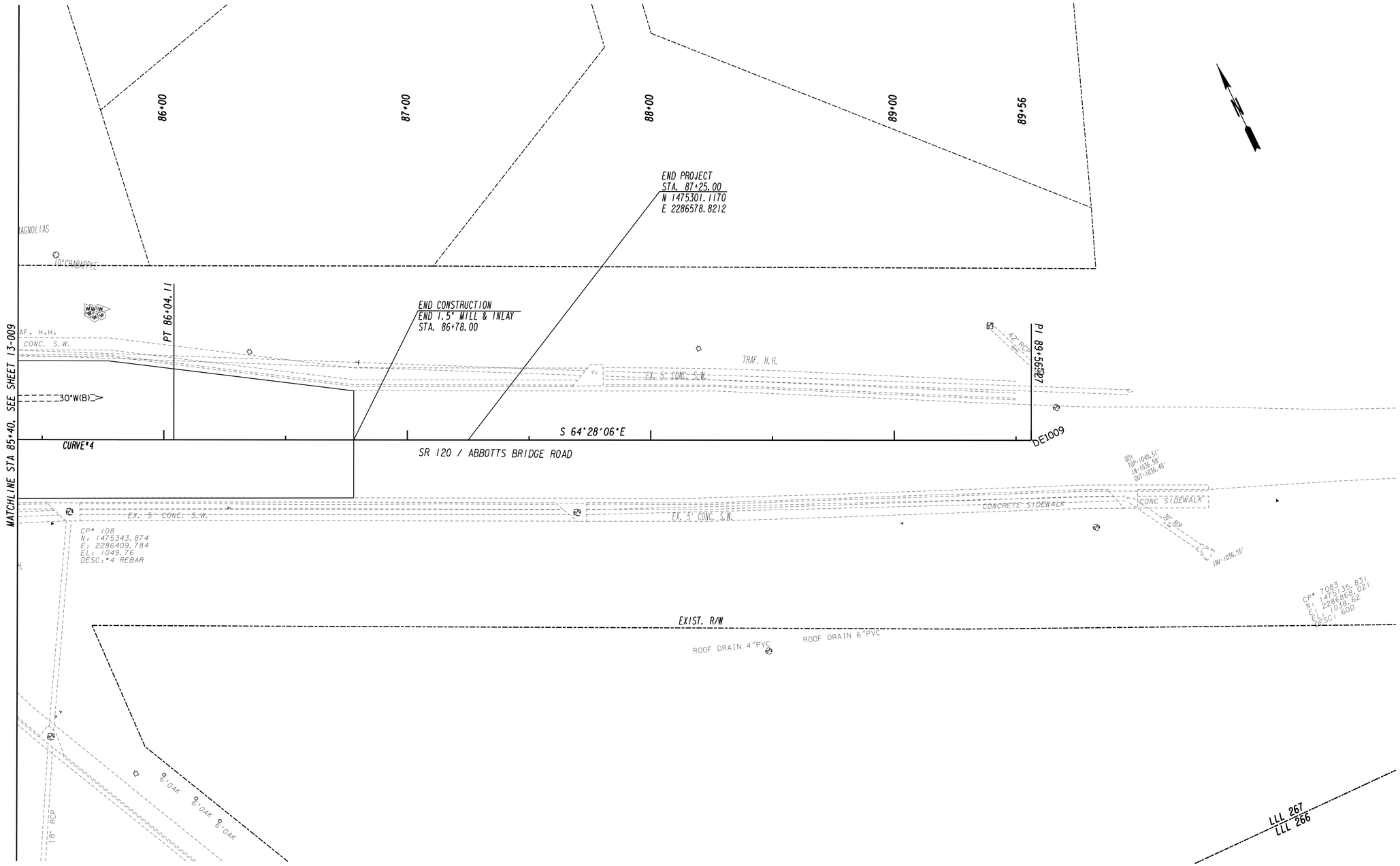
CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
13-009

3/1/2007 GPLN



PROPERTY AND EXISTING R/W LINE	PL
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	C F
ESMT FOR CONSTR & MAINT OF SLOPES	
ESMT FOR CONSTR OF SLOPES	
ESMT FOR CONSTR OF DRIVES	
MILL & OVERLAY CONSTRUCTION	
ESMT FOR CONSTR OF DRAINAGE	

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

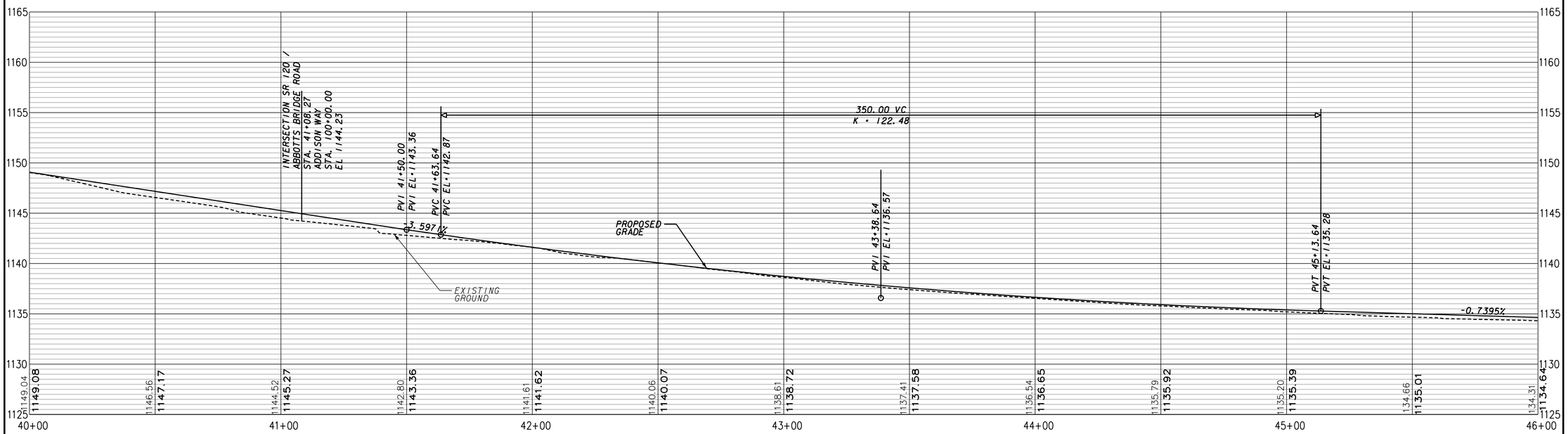
CITY OF JOHNS CREEK
PUBLIC WORKS

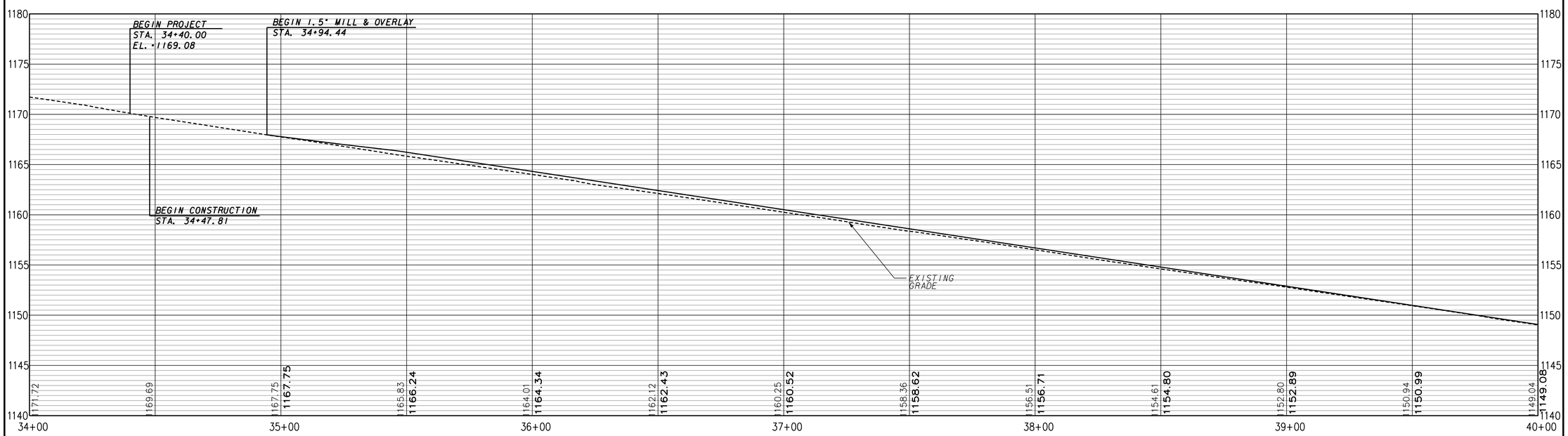
MAINLINE PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
$PROJECT #$ 1/27/2016

DRAWING No.
13-010

3/1/2007 GPLN





Johns Creek

Stantec

SCALE
HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

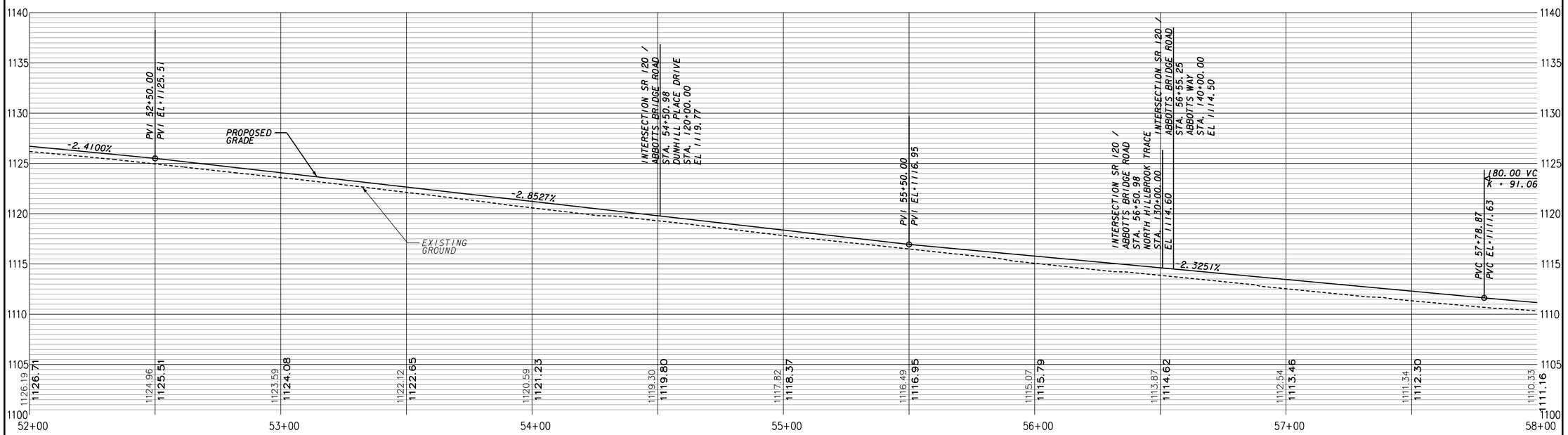
MAINLINE PROFILE

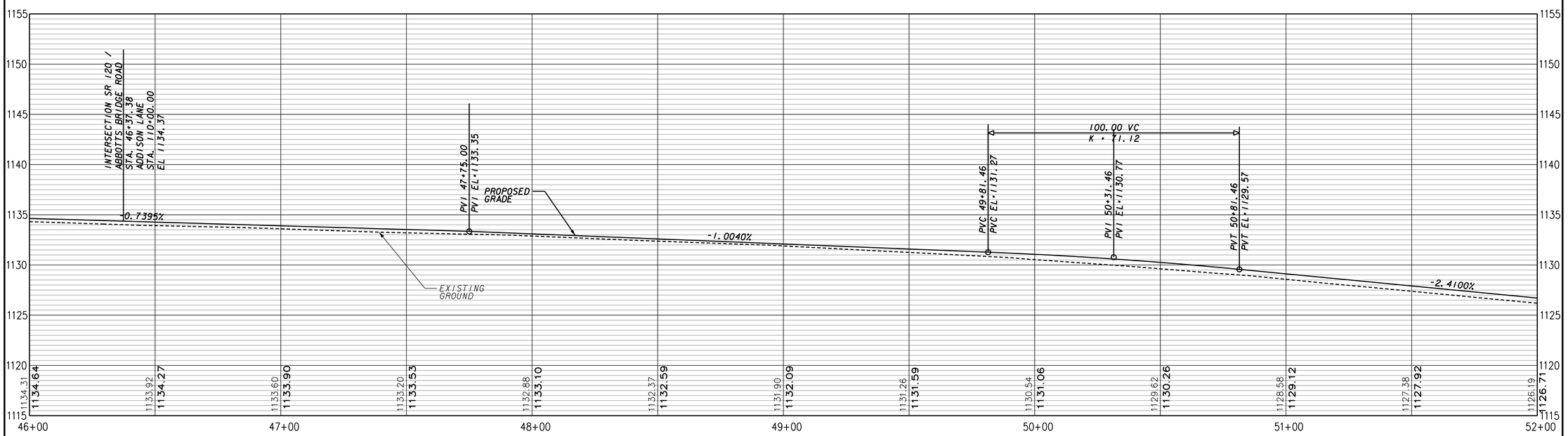
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
15-001

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	41	241





Johns Creek

Stantec

SCALE
HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

REVISION DATES

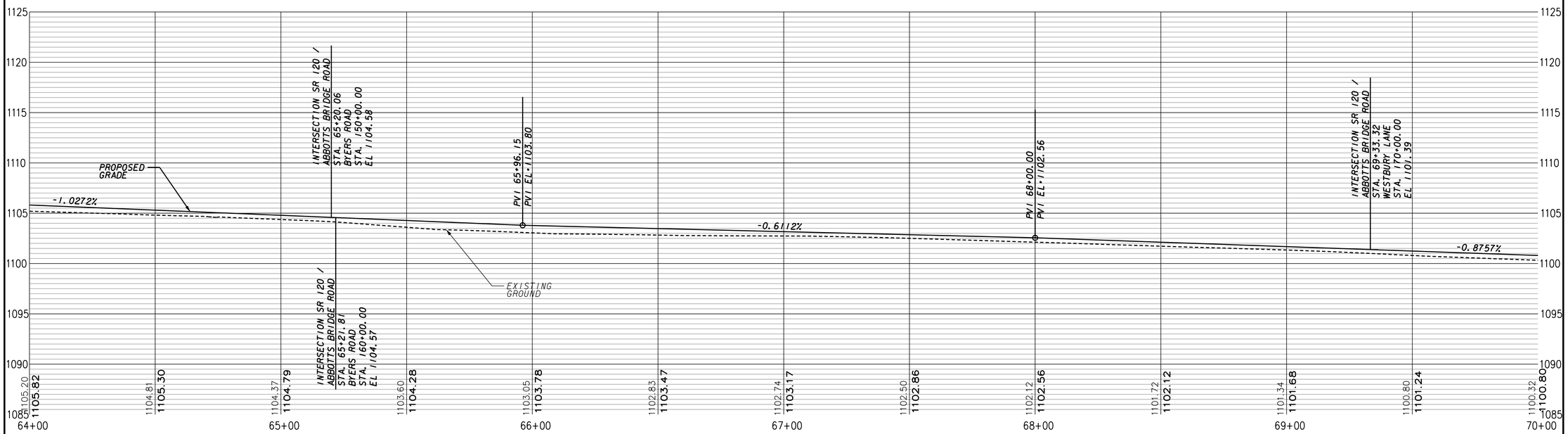
CITY OF JOHNS CREEK
PUBLIC WORKS

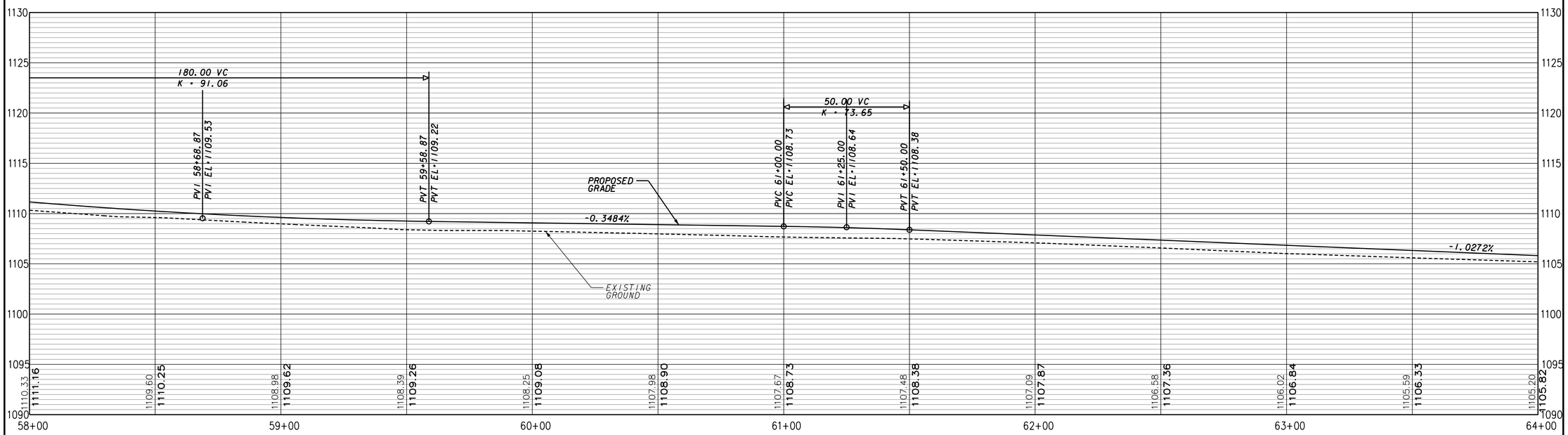
MAINLINE PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
15-002

3/1/2007 GPLN





Johns Creek

Stantec

SCALE
HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

REVISION DATES

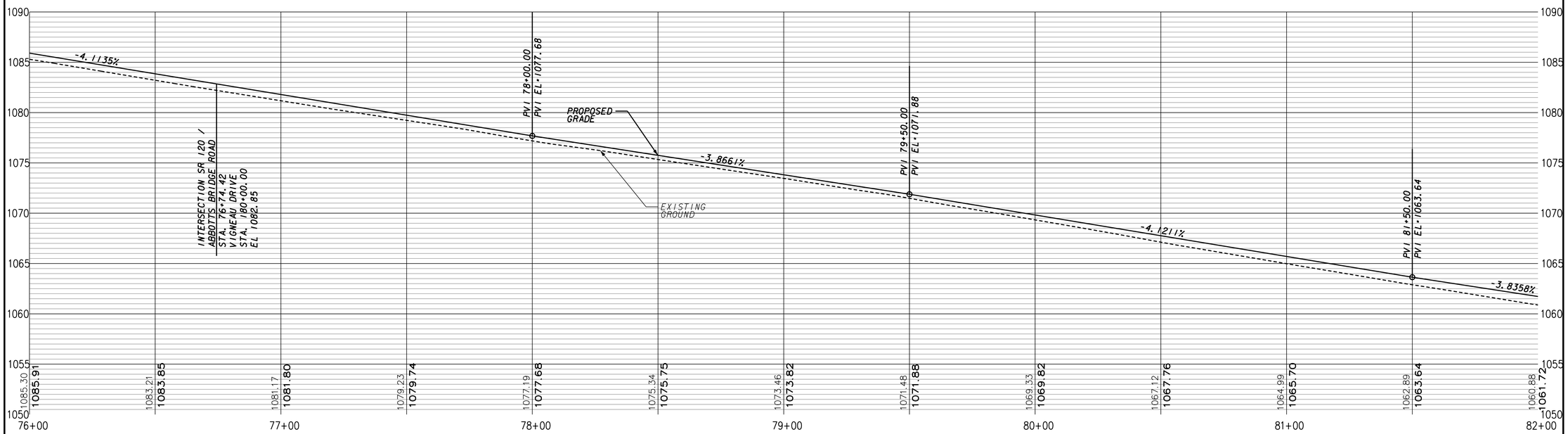
CITY OF JOHNS CREEK
PUBLIC WORKS

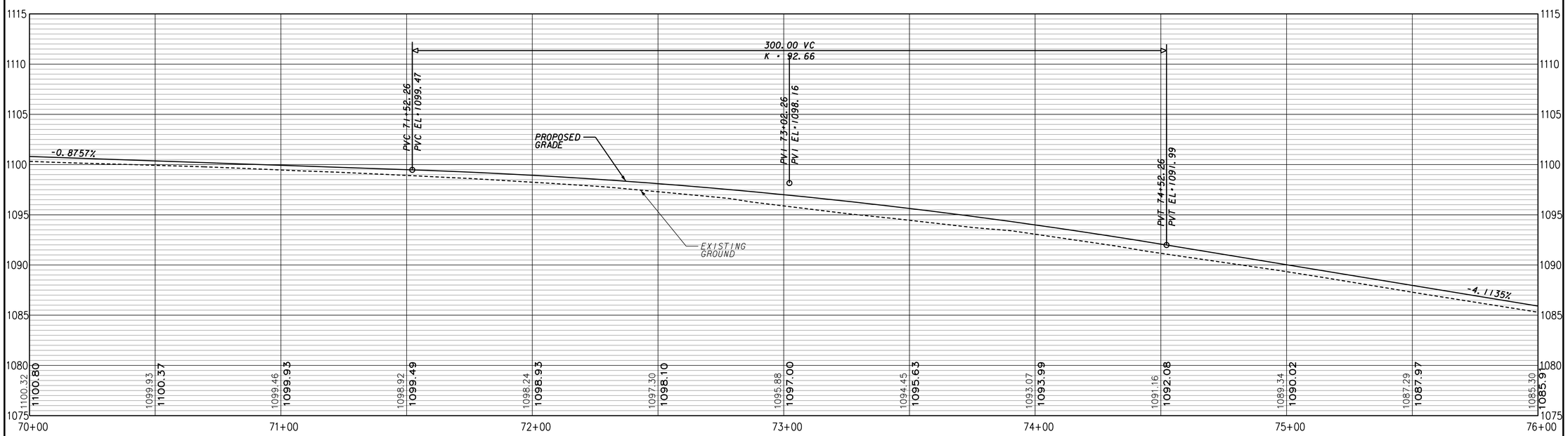
MAINLINE PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
15-003

3/1/2007 GPLN





3/1/2007 GPLN

Johns Creek

Stantec

SCALE
HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

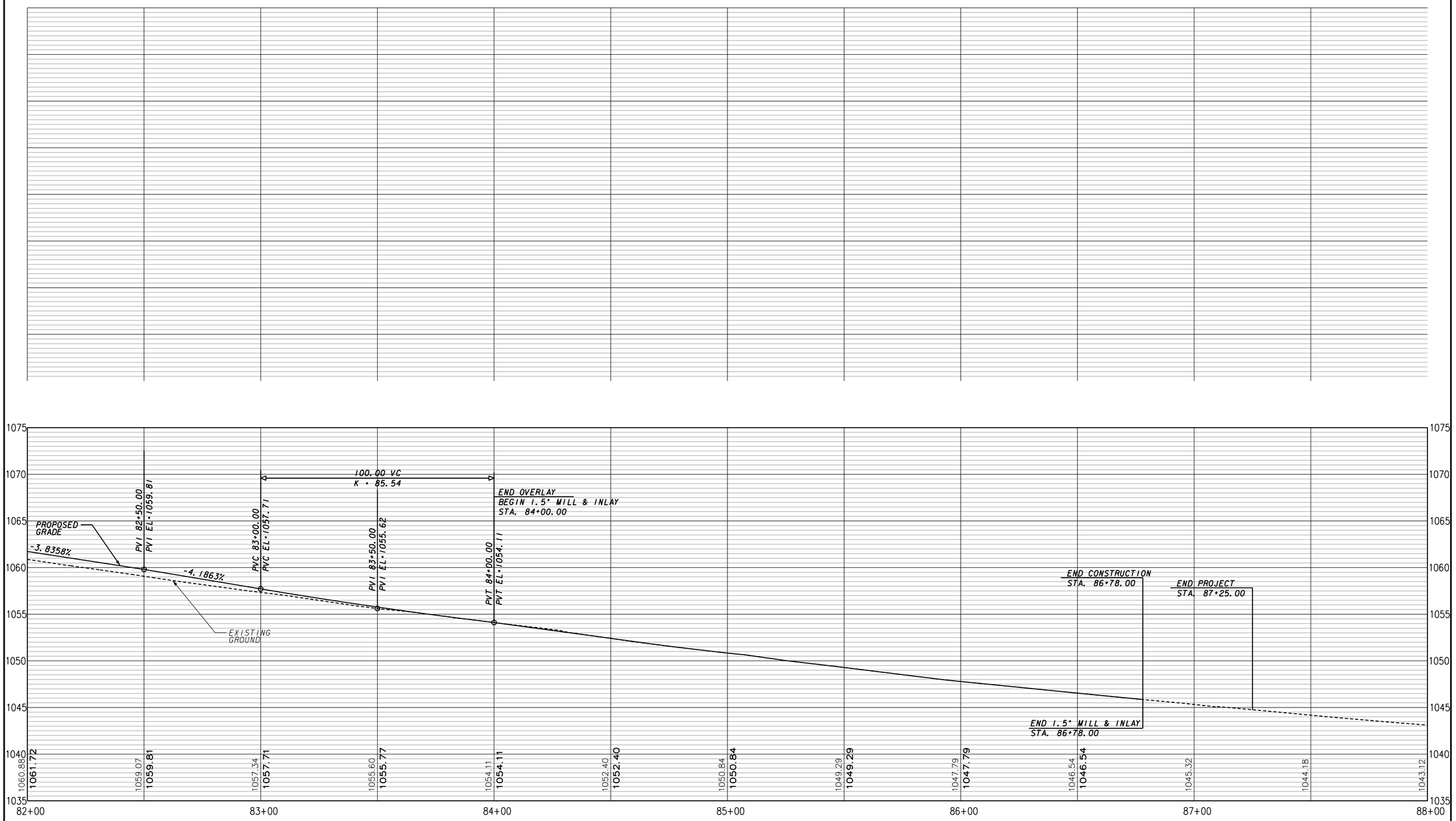
REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
15-004



Johns Creek

Stantec

SCALE
HORIZONTAL 1" = 20'
VERTICAL 1" = 5'

REVISION DATES

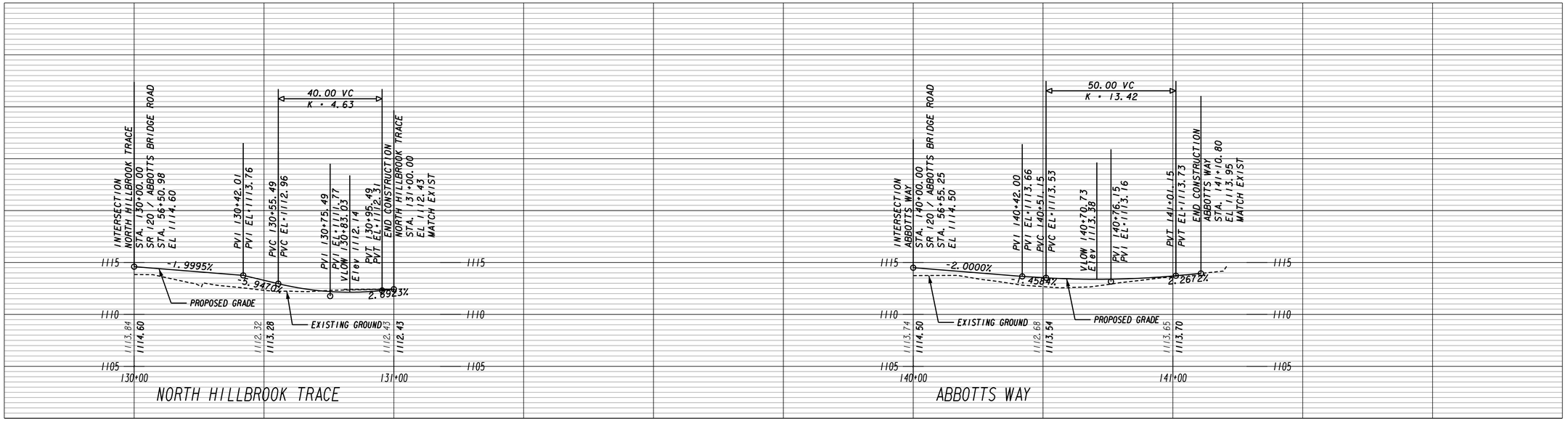
CITY OF JOHNS CREEK
PUBLIC WORKS

MAINLINE PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
15-005

3/1/2007 GPLN



Johns Creek

Stantec

HORIZONTAL: 20 SCALE
VERTICAL: 5 SCALE

REVISION DATES		

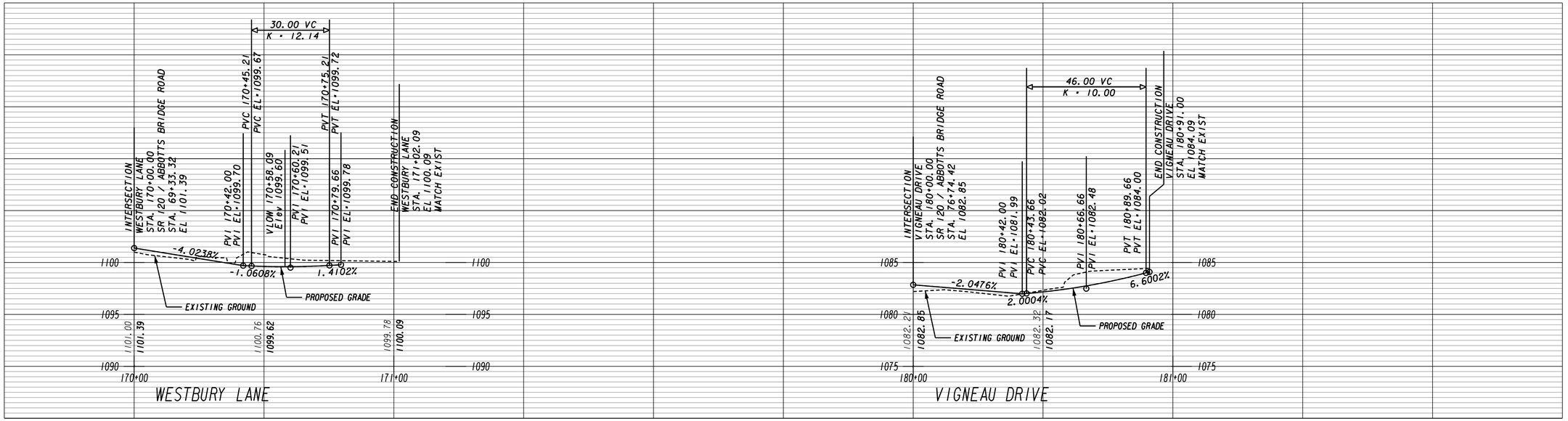
CITY OF JOHNS CREEK
PUBLIC WORKS

CROSSROAD PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING NO. 16-001

3/1/2007 GPLN



REVISION DATES		

Johns Creek

Stantec

HORIZONTAL: 20 SCALE
VERTICAL: 5 SCALE

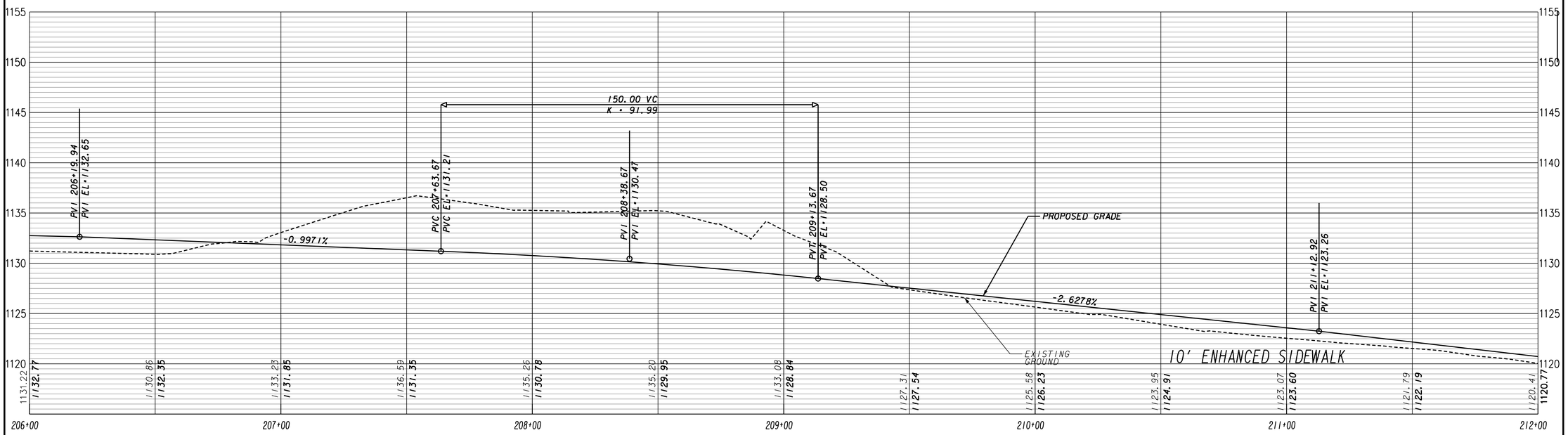
CITY OF JOHNS CREEK
PUBLIC WORKS

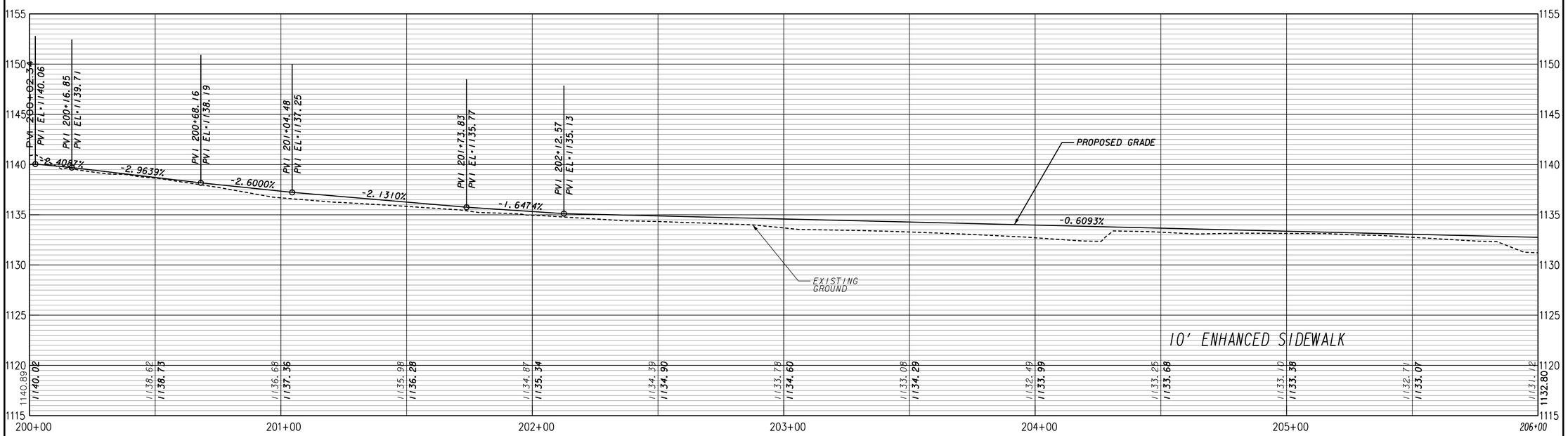
CROSSROAD PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING NO.
16-002

3/1/2007 GPLN





Johns Creek

Stantec

HORIZONTAL: 20 SCALE
VERTICAL: 5 SCALE

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

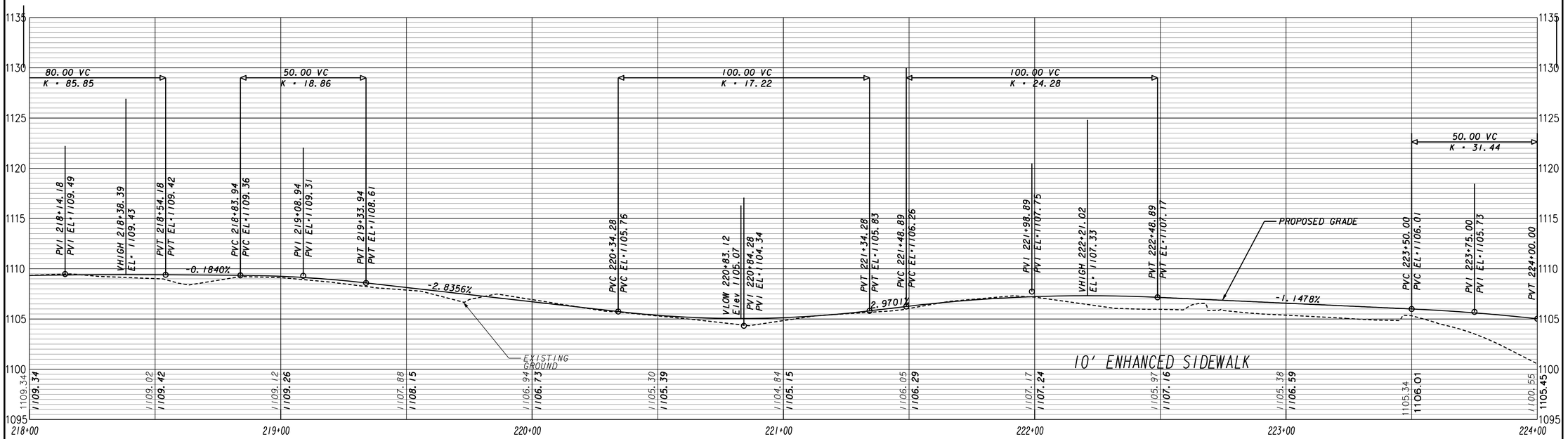
CROSSROAD PROFILE

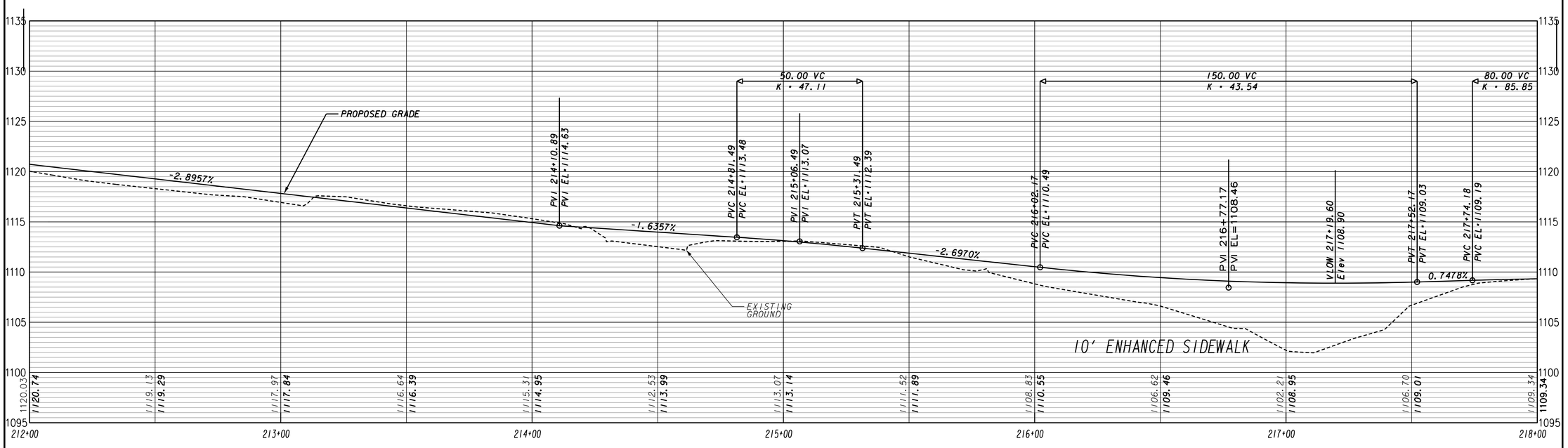
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
16-003

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	48	241





Johns Creek

Stantec

HORIZONTAL: 20 SCALE
VERTICAL: 5 SCALE

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

CROSSROAD PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
16-004

3/1/2007 GPLN

06/17/2015 6:27:21 PM
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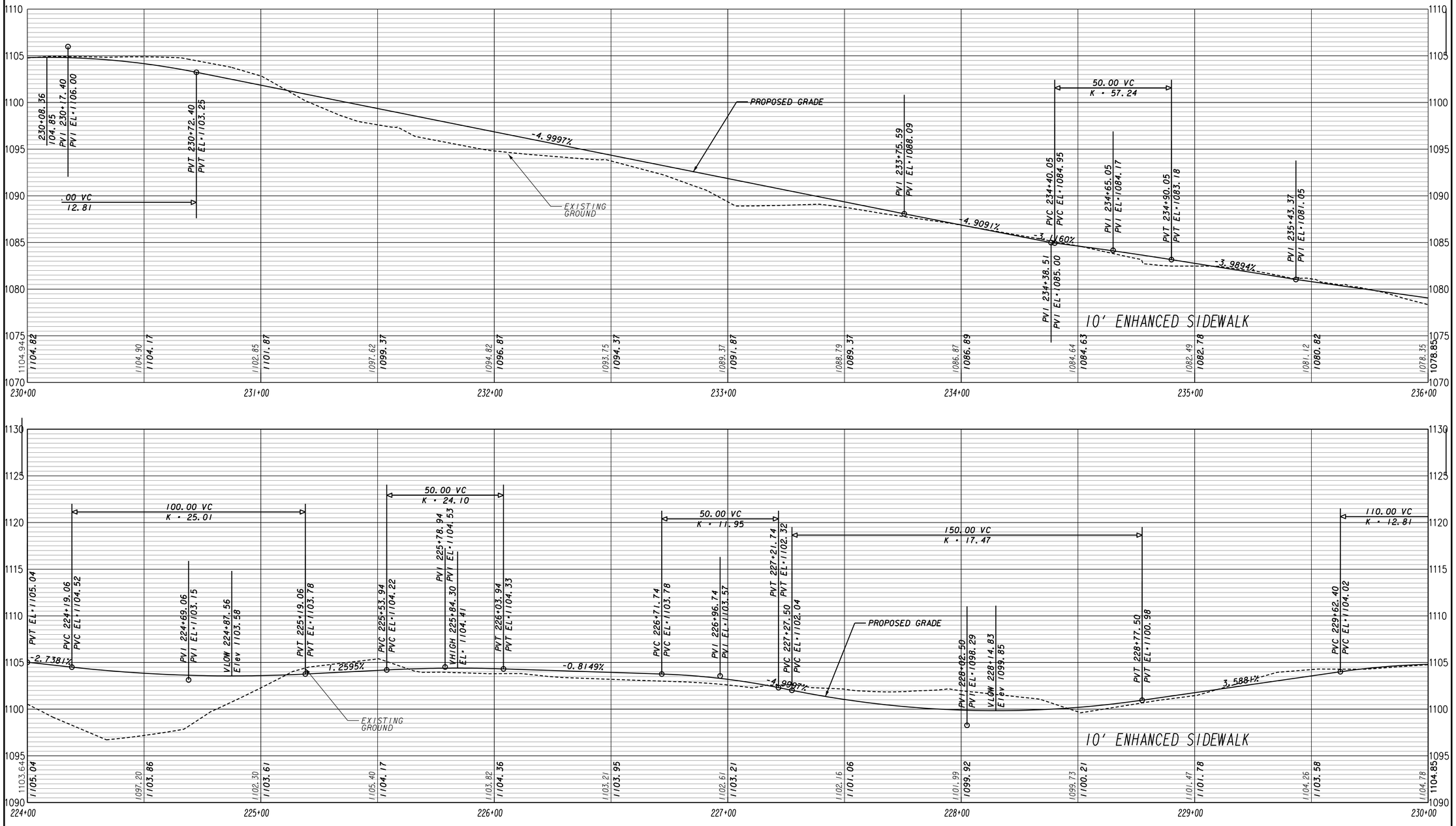
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	49	241



Johns Creek

Stantec

HORIZONTAL: 20 SCALE
VERTICAL: 5 SCALE

REVISION DATES		

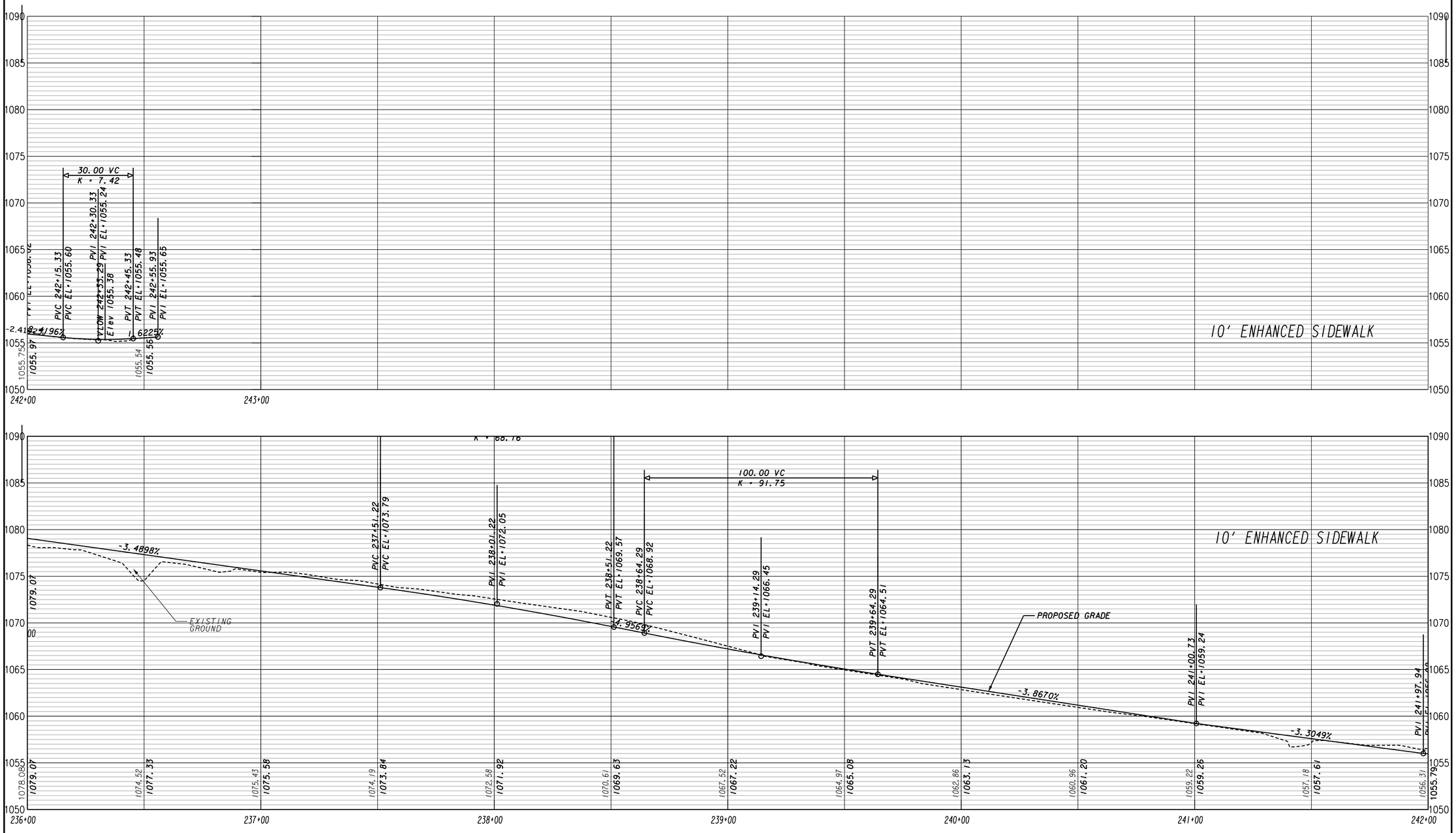
CITY OF JOHNS CREEK
PUBLIC WORKS

CROSSROAD PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
16-005

3/1/2007 GPLN



Johns Creek

Stantec

HORIZONTAL: 20 SCALE
VERTICAL: 5 SCALE

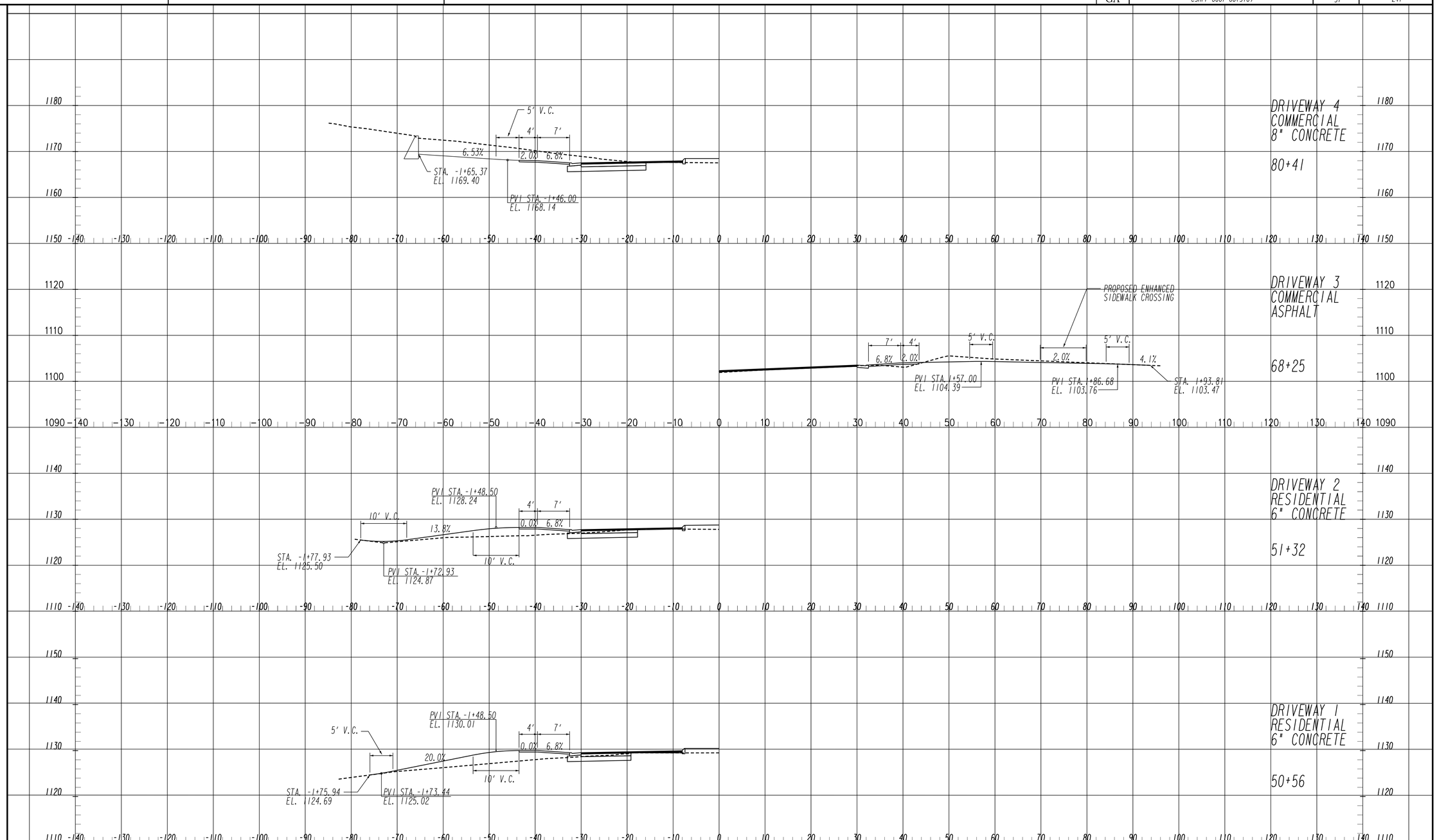
REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

CROSSROAD PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
16-006



Johns Creek

Stantec

SCALE IN FEET
0 10 20 40

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

DRIVEWAY PROFILE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
17-01

3/1/2007 SUBBEW

CONSTRUCTION STAGING

CONSTRUCTION STAGING PLANS ARE NOT PROVIDED. CONSTRUCTION CONSISTS OF WIDENING THE EXISTING SR 120/ABBOTTS BRIDGE ROAD PAVEMENT, ADDITION OF/MODIFICATION TO RAISED MEDIANS, IMPROVEMENTS TO THE EXISTING DRAINAGE INFRASTRUCTURE, AND OVERLAY OF EXISTING PAVEMENT. THE FOLLOWING NOTES ON TRAFFIC CONTROL AND CONSTRUCTION SEQUENCING ARE PROVIDED TO AID THE CONTRACTOR IN DEVELOPING ITS OWN DETAILED CONSTRUCTION STAGING PLAN.

TRAFFIC CONTROL

1. MAINTAIN TWO LANES OF TRAFFIC, ONE IN EACH DIRECTION, UNLESS SPECIFIED BELOW.

2. IF APPROVED BY THE ENGINEER, TRAFFIC MAY BE TEMPORARILY REDUCED WITH FLAGGING OPERATIONS TO ONE LANE FOR THE INSTALLATION OF DRAINAGE PIPES OR OTHER CONSTRUCTION ACTIVITIES.

3. MAINTAIN ACCESS TO ALL INTERSECTING STREETS AND DRIVEWAYS AT ALL TIMES. CLOSURE OF STREETS AND DRIVEWAYS FOR THE INSTALLATION OF DRAINAGE PIPES OR OTHER CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE ENGINEER AND/OR THE PROPERTY OWNER.

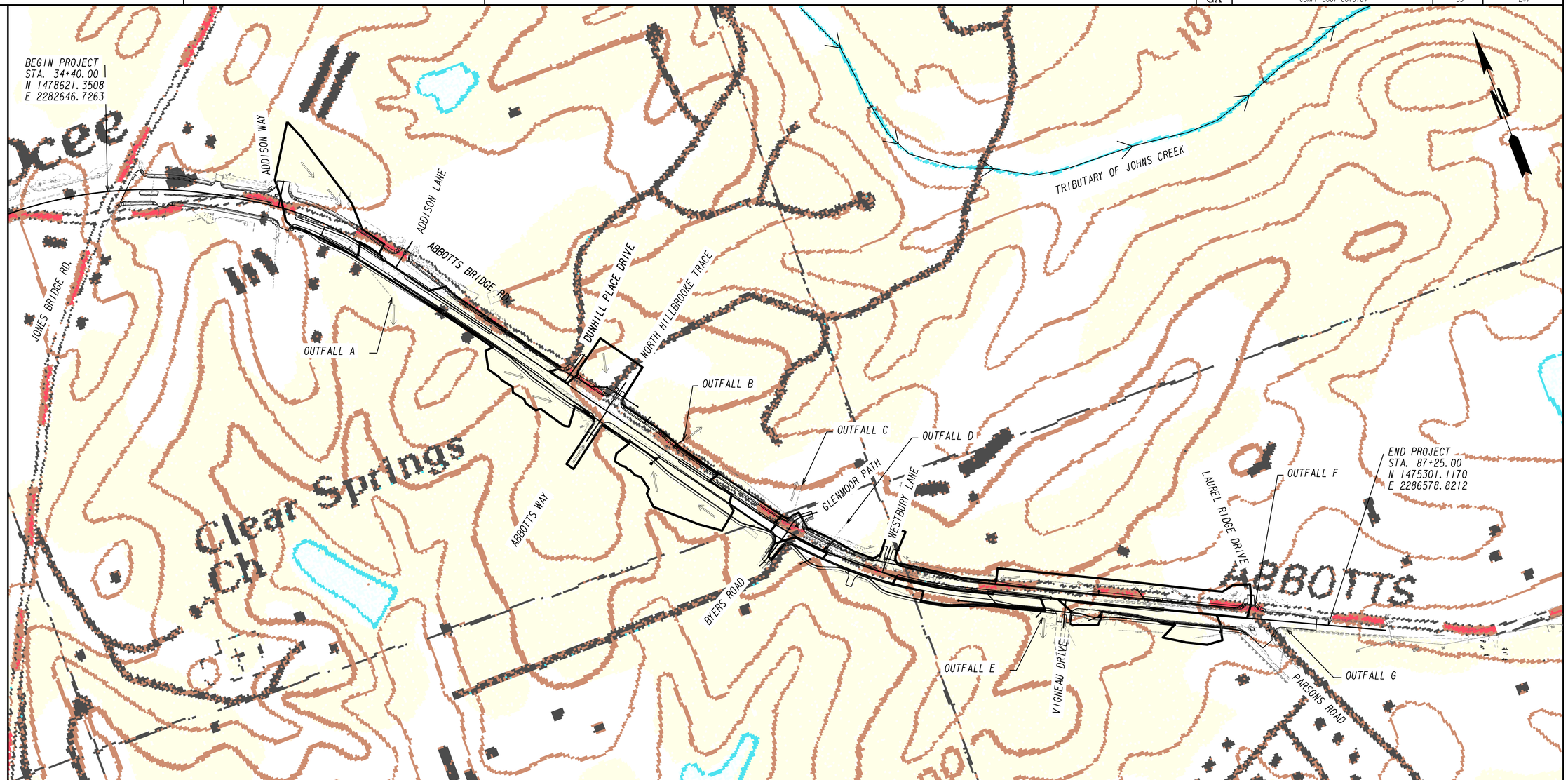
CONSTRUCTION SEQUENCING

1. CONSTRUCT WIDENING, INCLUDING PAVEMENT, CURB-AND-GUTTER, AND SIDEWALKS, ON LEFT AND RIGHT SIDES. DO NOT CONSTRUCT SURFACE COURSE OF ASPHALT PAVING. LEVELING OF EXISTING PAVEMENT MAY BE REQUIRED TO ENSURE PROPER DRAINAGE DURING CONSTRUCTION.

2. CONSTRUCT PROPOSED MEDIAN.

3. CONSTRUCT SURFACE COURSE OF ASPHALT PAVING.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	53	241



Drainage Area	Outfall Structure	Station	Offset	Pipe Size (in)	Drainage Area (acres)	Run-off Coeff. C		Pre Volume Q(25) cfs	Post Volume Q(25) cfs	Pre Velocity V(25) ft/sec	Post Velocity V(25) ft/sec
						Cpre	Cpost				
A	EXIST 24"	46+92	106' RT	18	2.78	0.88	0.88	12.85	12.85	10.43	10.43
B	HEADWALL	59+73	76' LT	24	6.68	0.49	0.61	23.24	28.93	5.98	6.36
C	EXIST 18"	64+75	187' LT	18	0.46	0.57	0.95	1.86	3.10	9.15	10.63
D	EXIST 18"	67+23	131' LT	18	0.55	0.82	0.95	3.20	3.71	8.00	8.35
E	HEADWALL	75+89	80' RT	18	0.71	0.65	0.68	3.28	3.43	6.19	6.27
F	EXIST 30	84+27	52' LT	30	3.74	0.57	0.75	39.93	44.64	9.52	9.09
G	EXIST 24	85+61	30' RT	24	1.07	0.67	0.66	5.09	5.01	8.59	8.55

NOTES:
1. TOTAL DISTURBED AREA = 7.95 ACRES
2. TOTAL PROJECT AREA = 13.98 ACRES
3. THERE ARE NO RECEIVING WATERS WITHIN THE PROJECT LIMITS. ALL OUTFALLS ARE IDENTIFIED. ALL RUNOFF TRAVERSES THROUGH NATURAL CHANNELS TO TRIBUTARIES OF JOHNS CREEK.

Johns Creek

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SCALE IN FEET
0 200 400 800

REVISION DATES

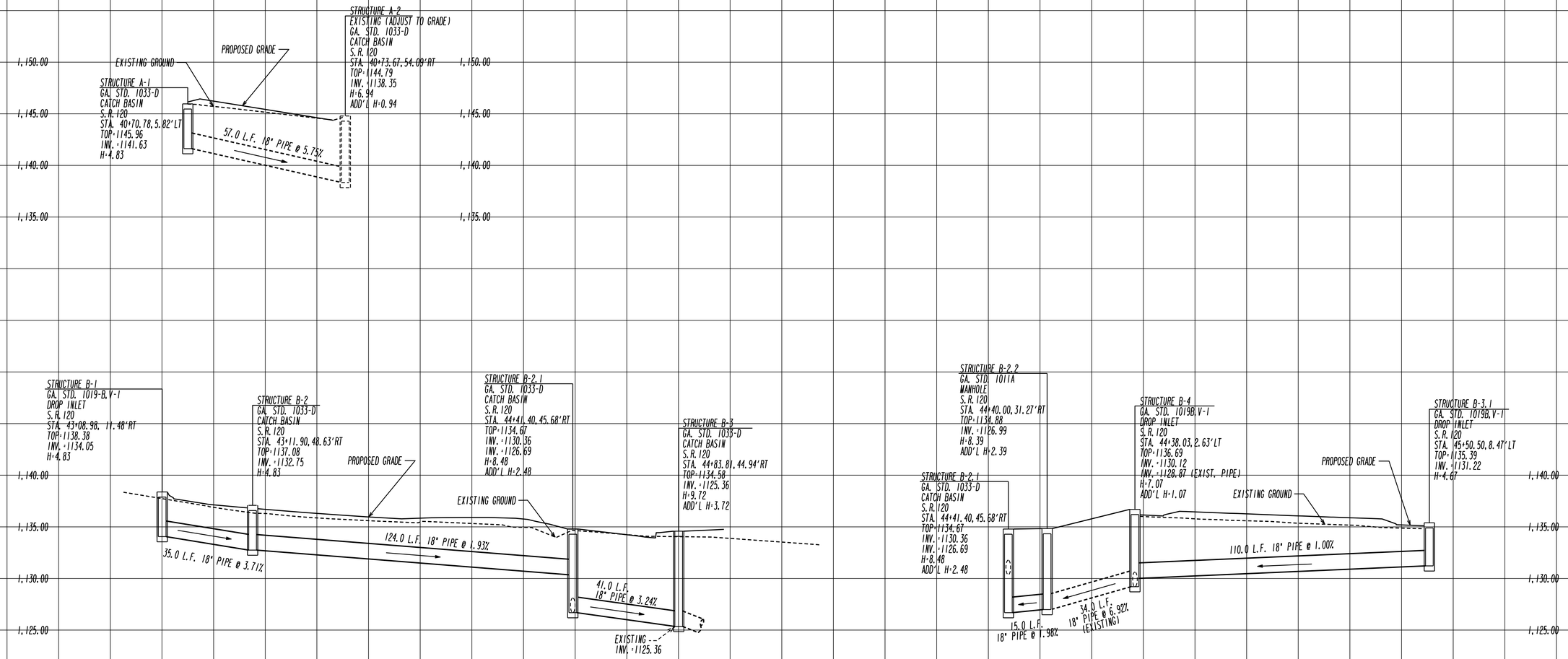
CITY OF JOHNS CREEK
PUBLIC WORKS

DRAINAGE AREA MAP

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
21-001

3/1/2007 GPLN



Johns Creek

Stantec

HORIZONTAL SCALE IN FEET
0 20 40 80

VERTICAL SCALE IN FEET
0 5 10 20

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

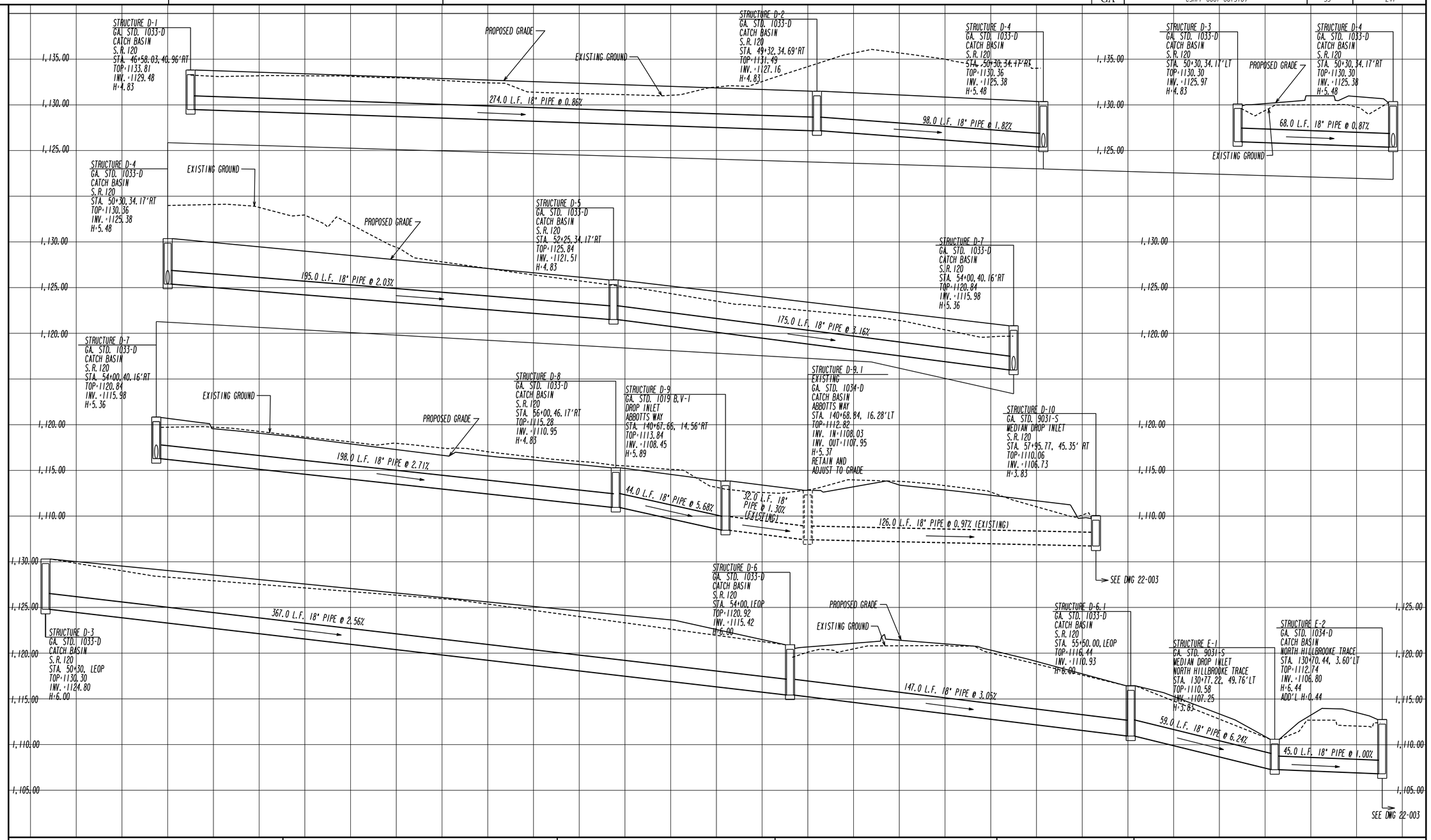
DRAINAGE PROFILES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
22-001

3/1/2007 SUBBEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	55	241



Johns Creek

Stantec

HORIZONTAL SCALE IN FEET
0 20 40 80

VERTICAL SCALE IN FEET
0 5 10 20

REVISION DATES

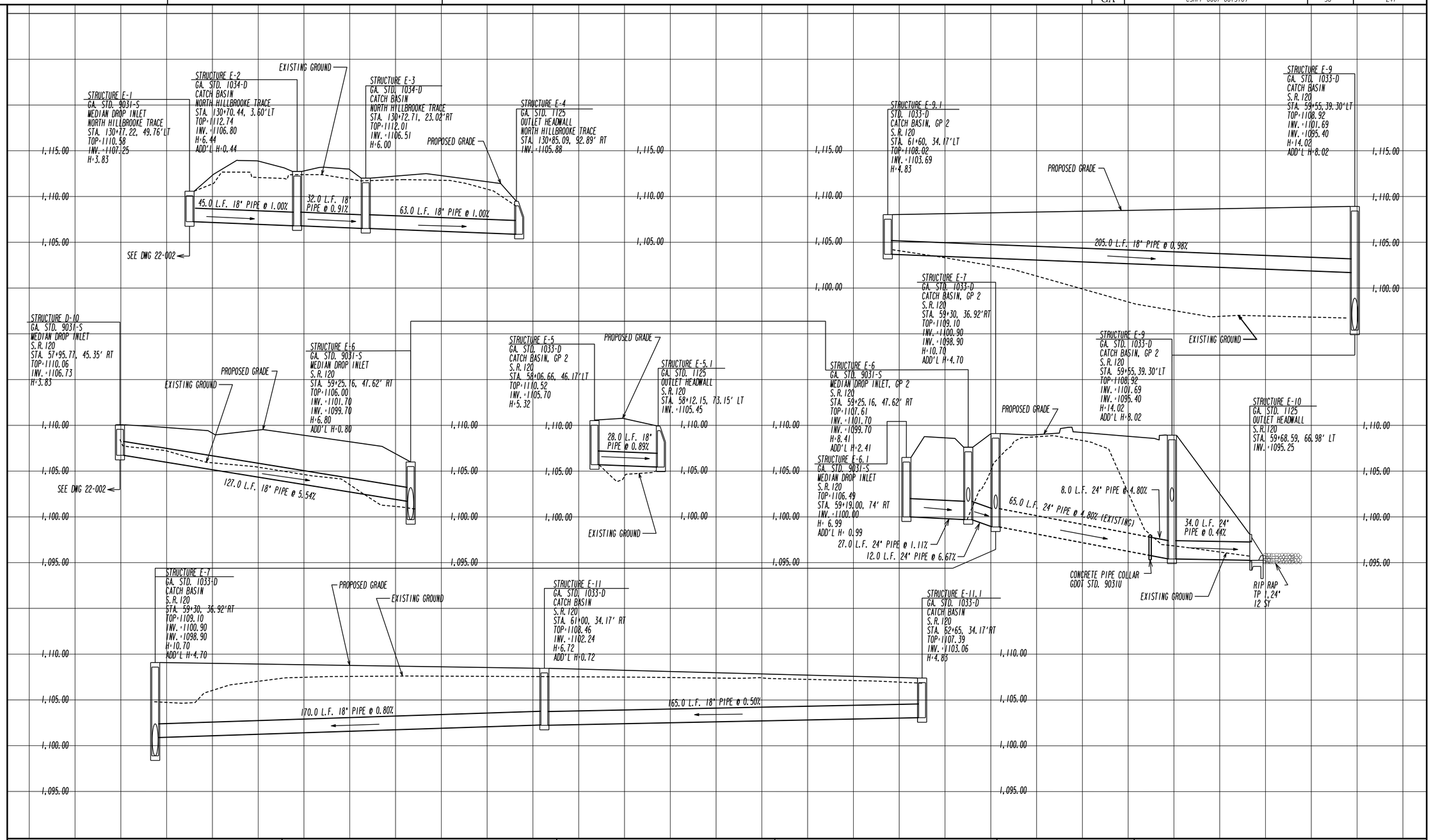
CITY OF JOHNS CREEK
PUBLIC WORKS

DRAINAGE PROFILES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
22-002

3/1/2007 SUBBEW



Johns Creek

Stantec

HORIZONTAL SCALE IN FEET
0 20 40 80

VERTICAL SCALE IN FEET
0 5 10 20

REVISION DATES		

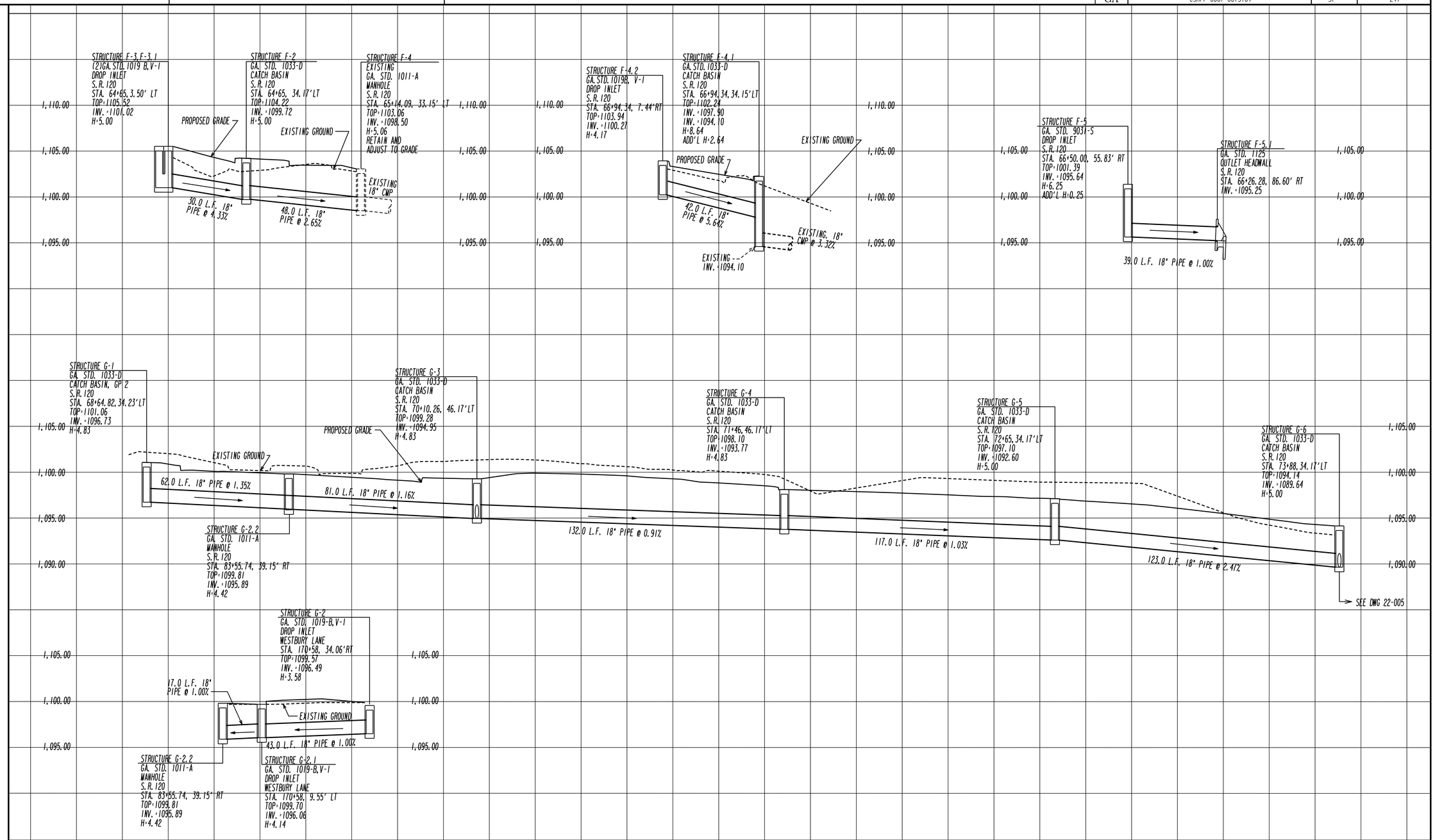
CITY OF JOHNS CREEK
PUBLIC WORKS

DRAINAGE PROFILES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
22-003

3/1/2007 SUBBEW



Johns Creek

Stantec

HORIZONTAL SCALE IN FEET
0 20 40 80

VERTICAL SCALE IN FEET
0 5 10 20

REVISION DATES

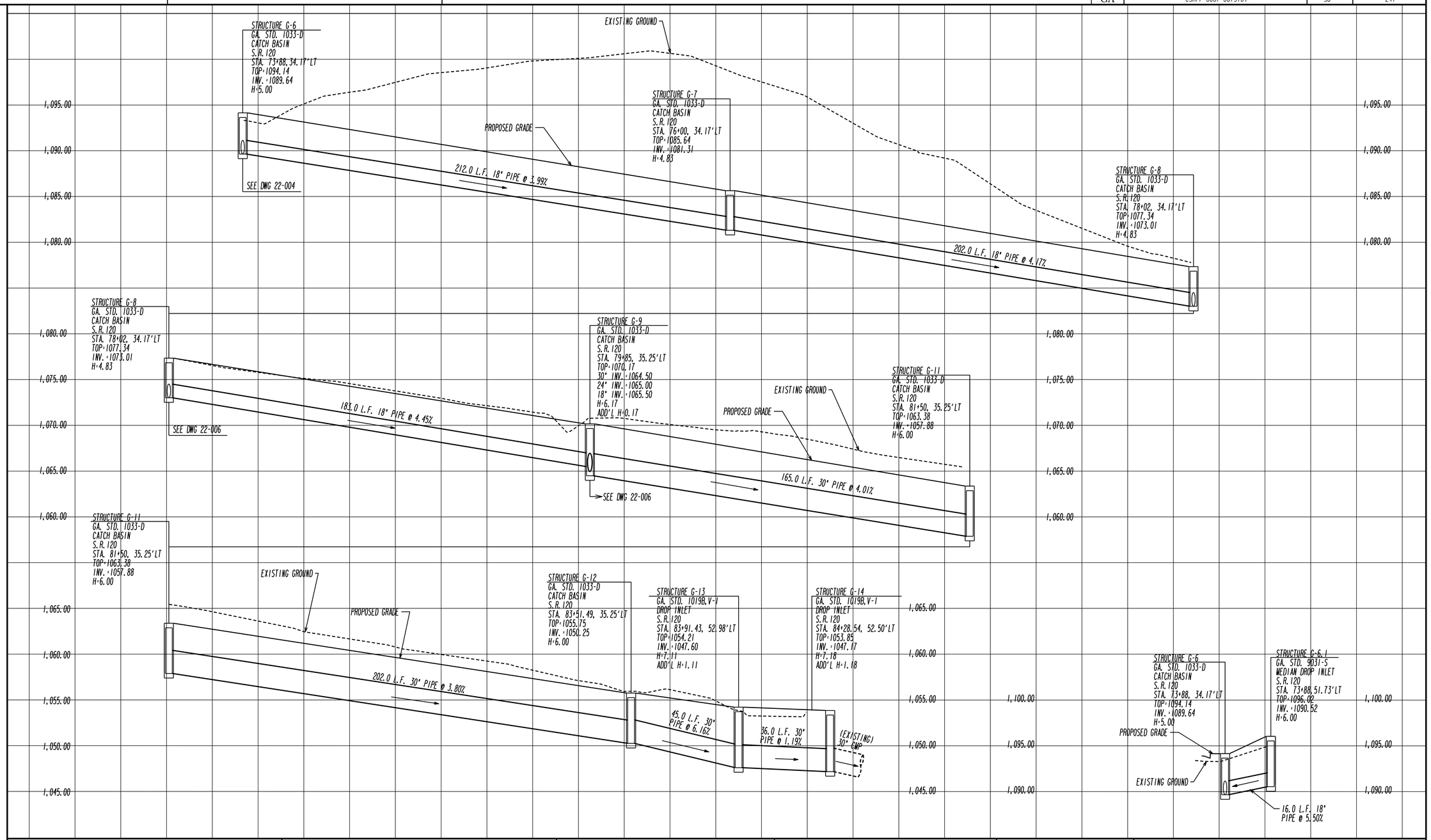
CITY OF JOHNS CREEK
PUBLIC WORKS

DRAINAGE PROFILES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
22-004

3/1/2007 SUBBEW



Johns Creek

Stantec

HORIZONTAL SCALE IN FEET
0 20 40 80

VERTICAL SCALE IN FEET
0 5 10 20

REVISION DATES

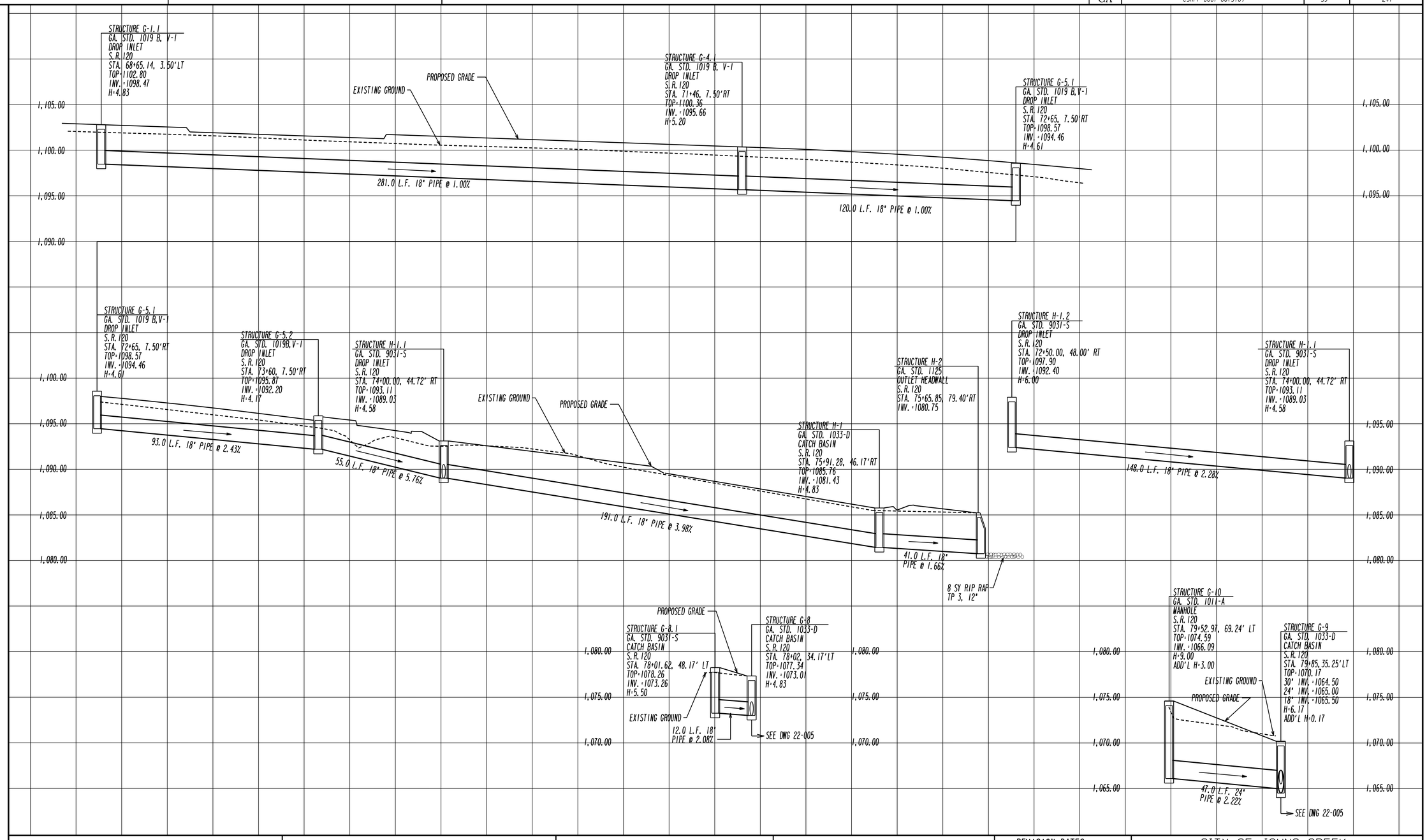
CITY OF JOHNS CREEK
PUBLIC WORKS

DRAINAGE PROFILES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
22-005

3/1/2007 SUBSEW



Johns Creek

Stantec

HORIZONTAL SCALE IN FEET
0 20 40 80

VERTICAL SCALE IN FEET
0 5 10 20

REVISION DATES

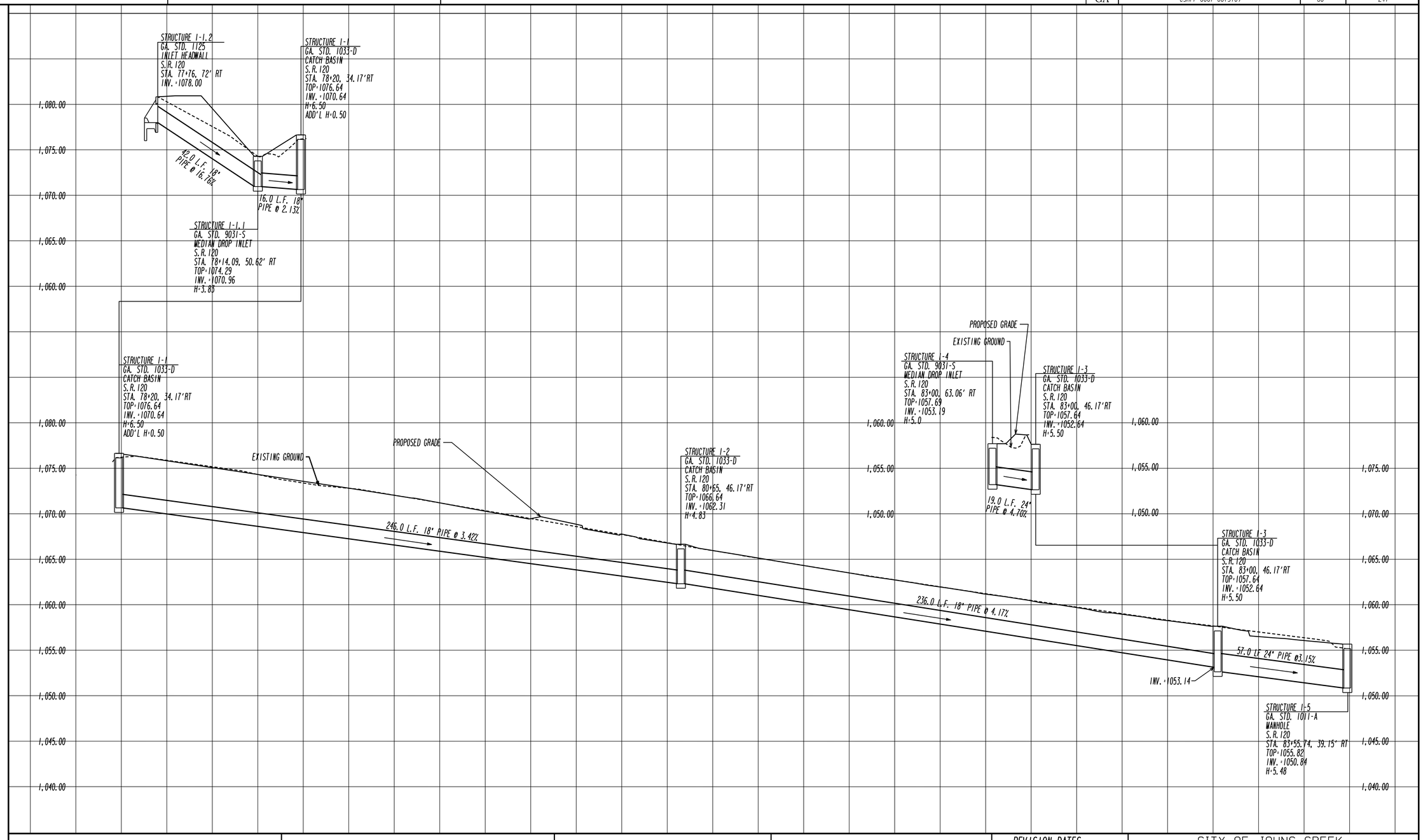
CITY OF JOHNS CREEK
PUBLIC WORKS

DRAINAGE PROFILES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
22-006

3/1/2007 SUBSEW



Johns Creek

Stantec

HORIZONTAL SCALE IN FEET
0 20 40 80

VERTICAL SCALE IN FEET
0 5 10 20

REVISION DATES

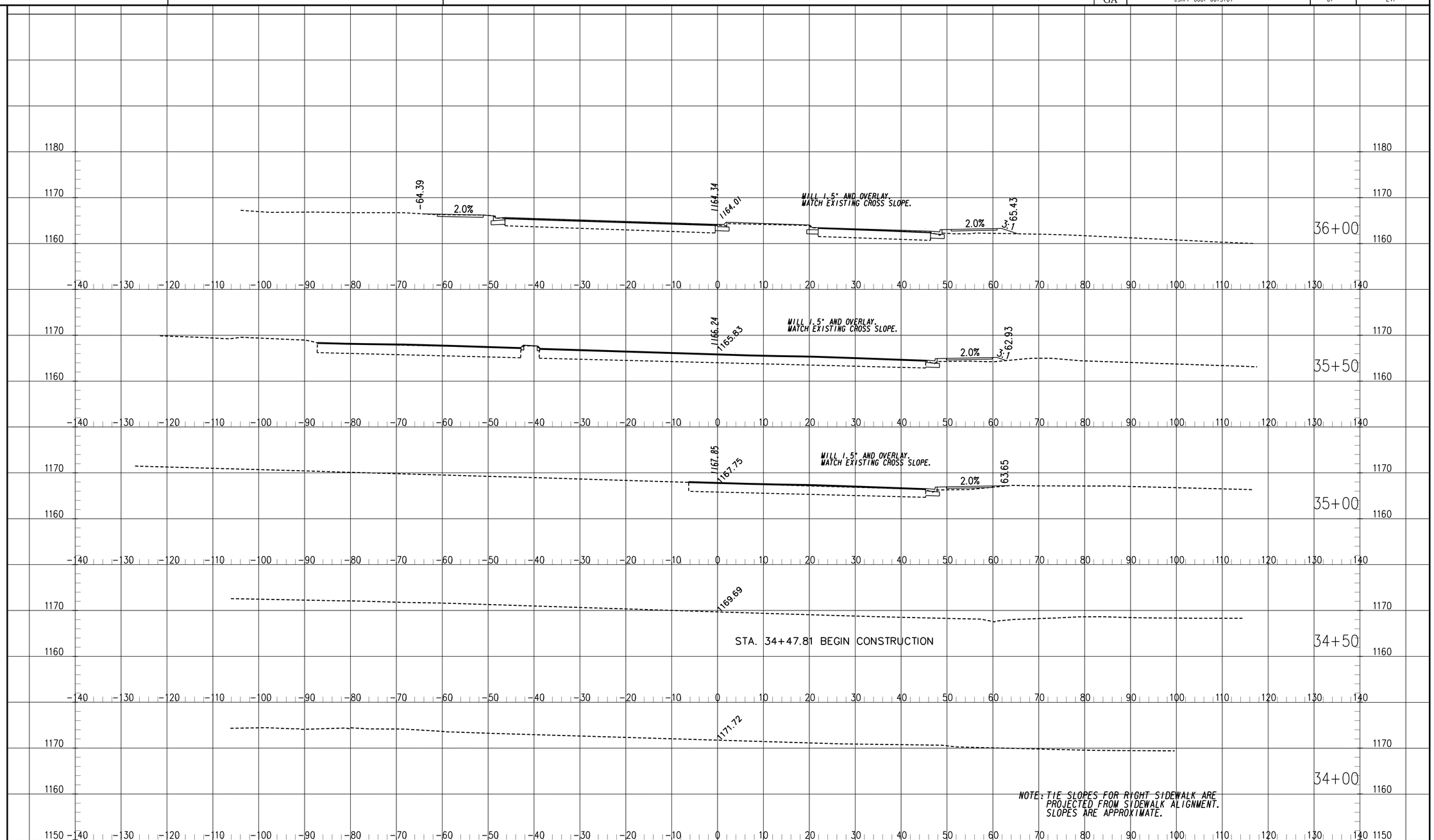
CITY OF JOHNS CREEK
PUBLIC WORKS

DRAINAGE PROFILES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
22-007

3/1/2007 SUBBEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

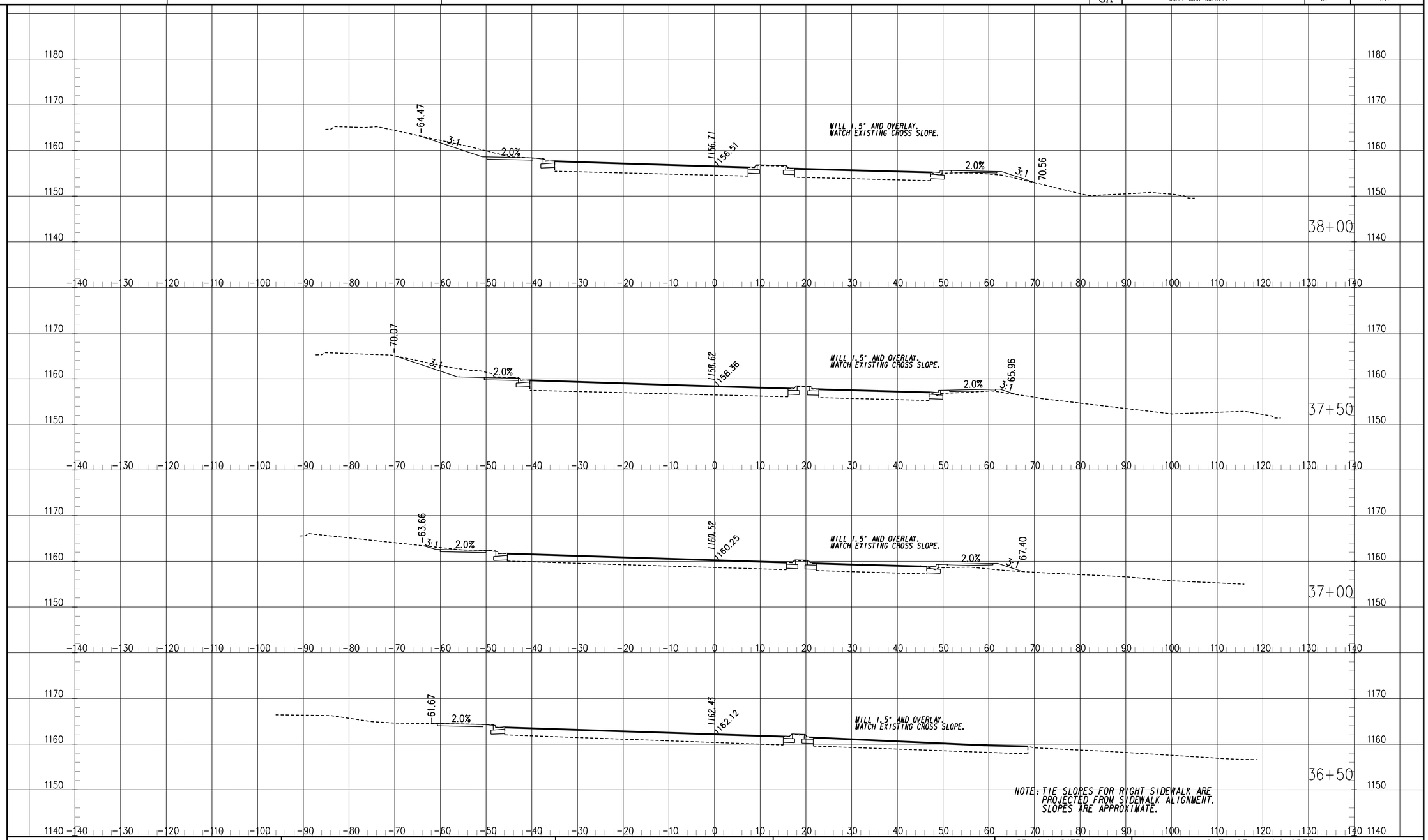
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-001

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	62	241



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

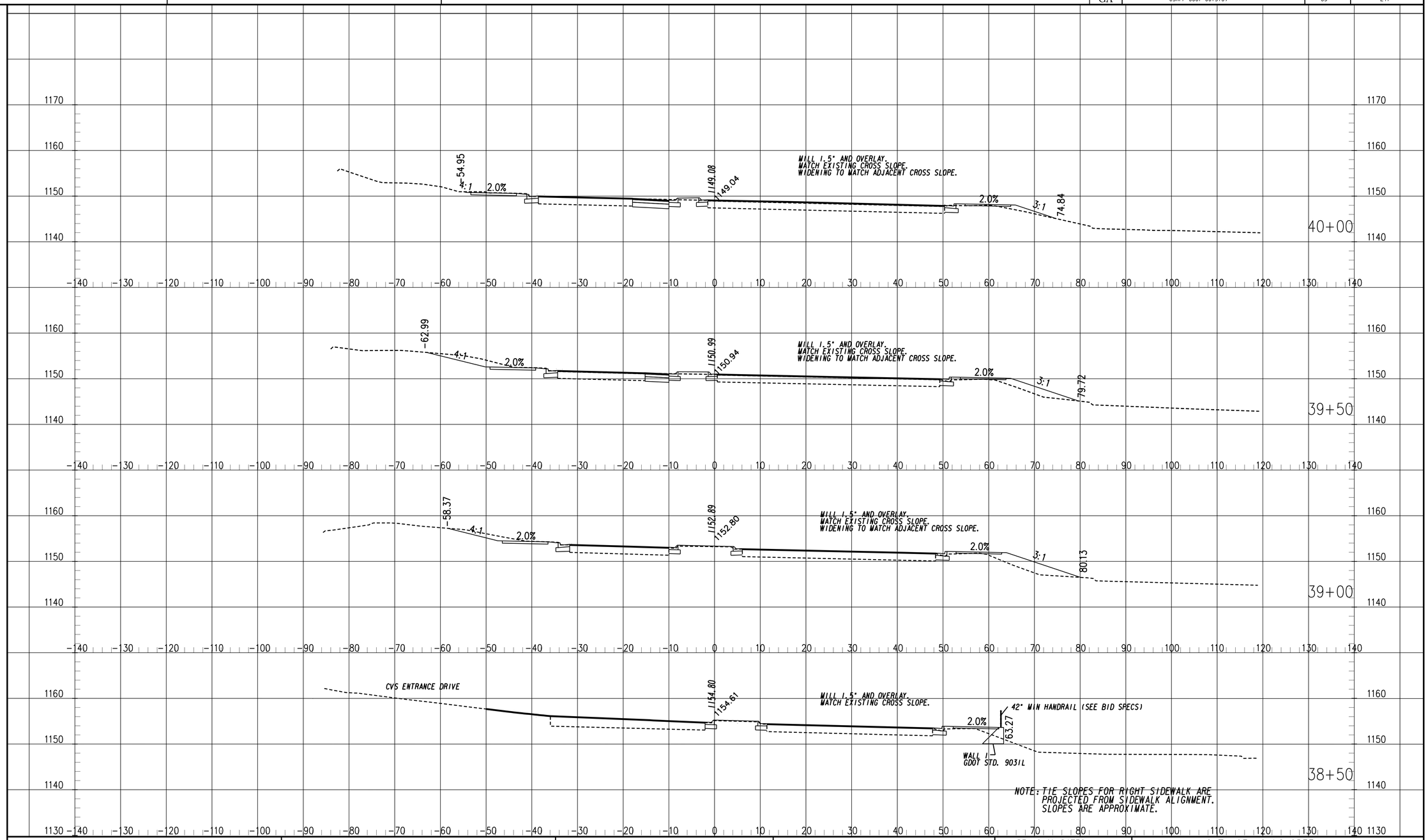
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-002

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	63	241



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ

1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

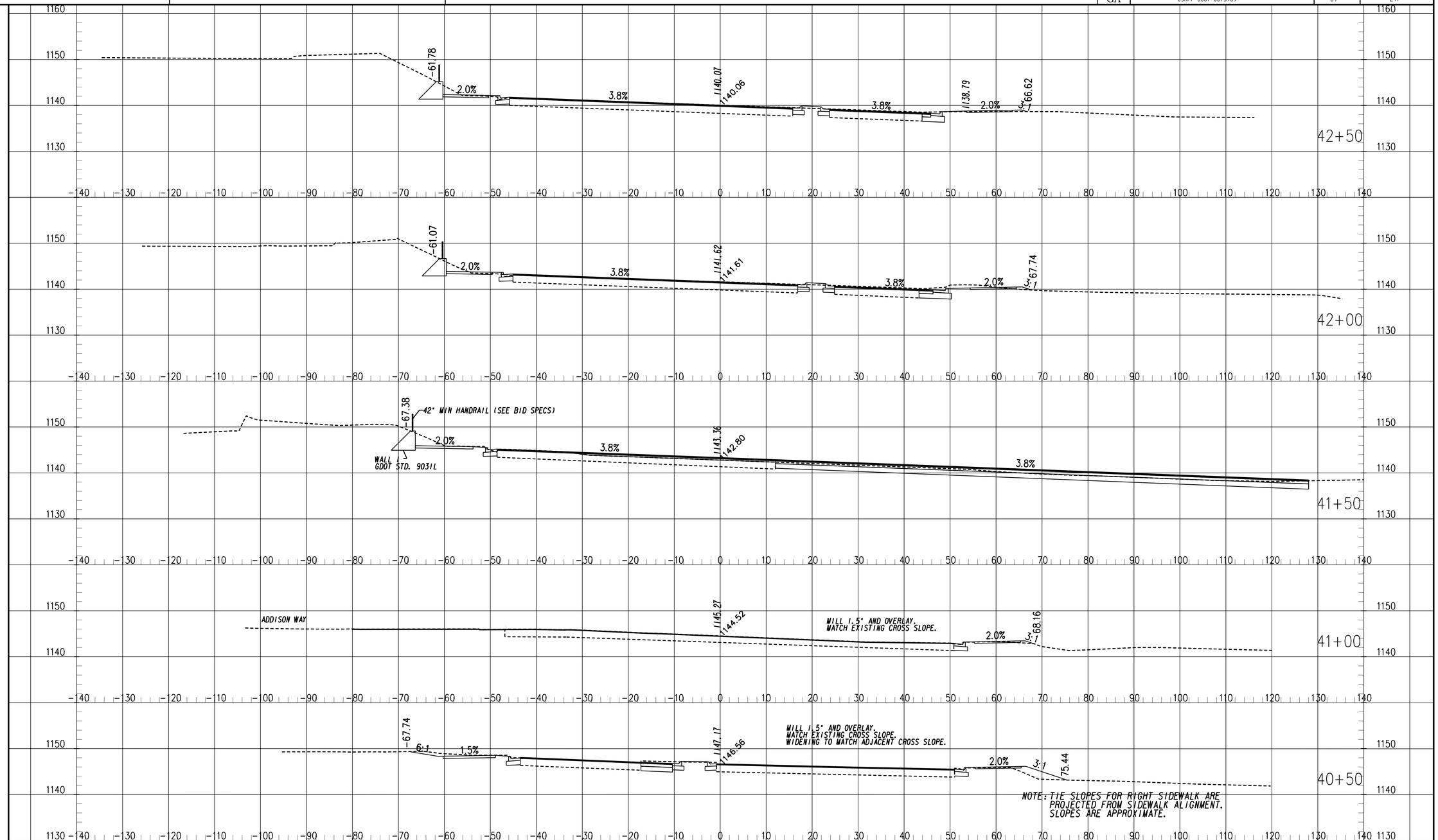
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-003

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ

1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

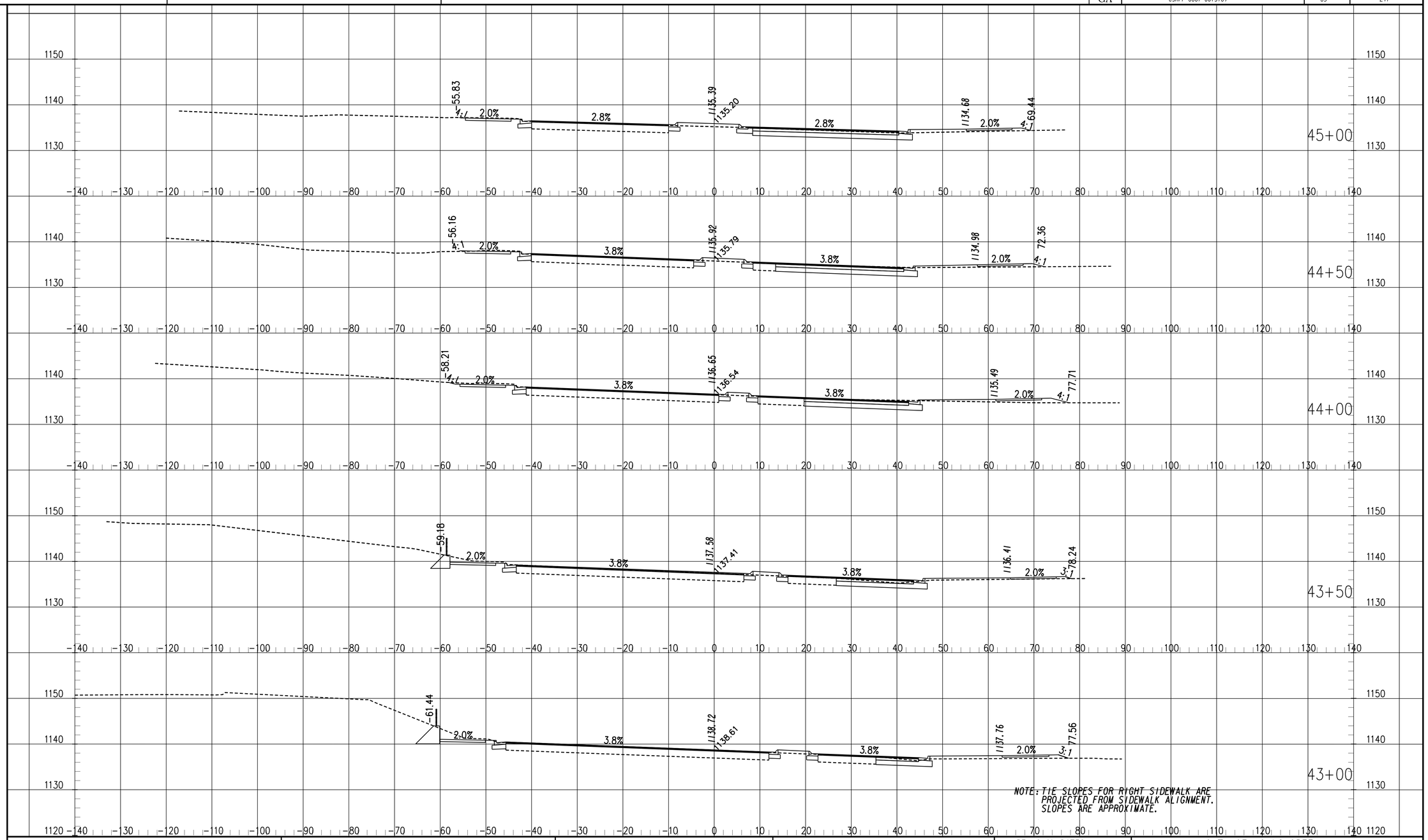
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-004

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	65	241



NOTE: TIE SLOPES FOR RIGHT SIDEWALK ARE PROJECTED FROM SIDEWALK ALIGNMENT. SLOPES ARE APPROXIMATE.

Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

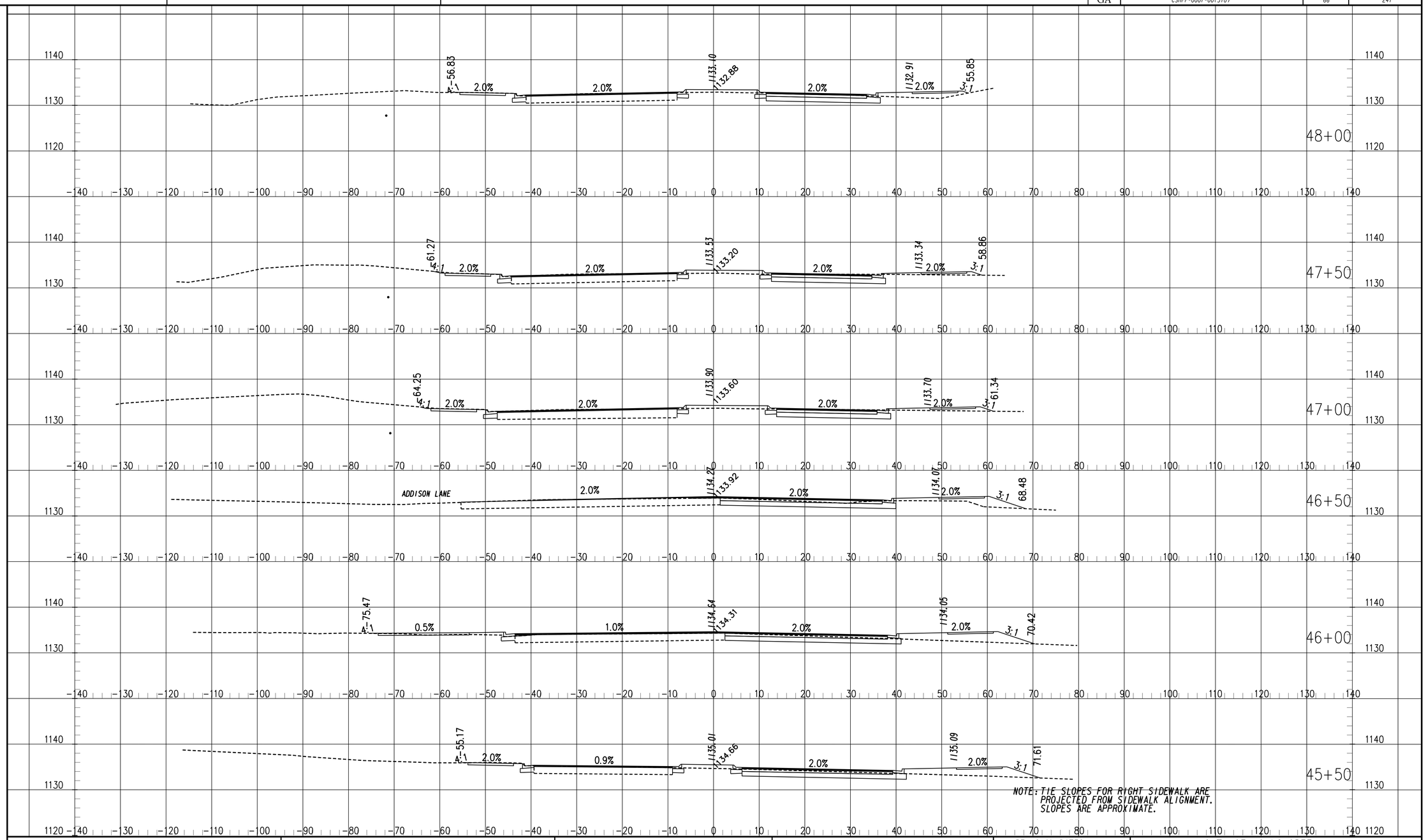
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-005

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	66	241



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

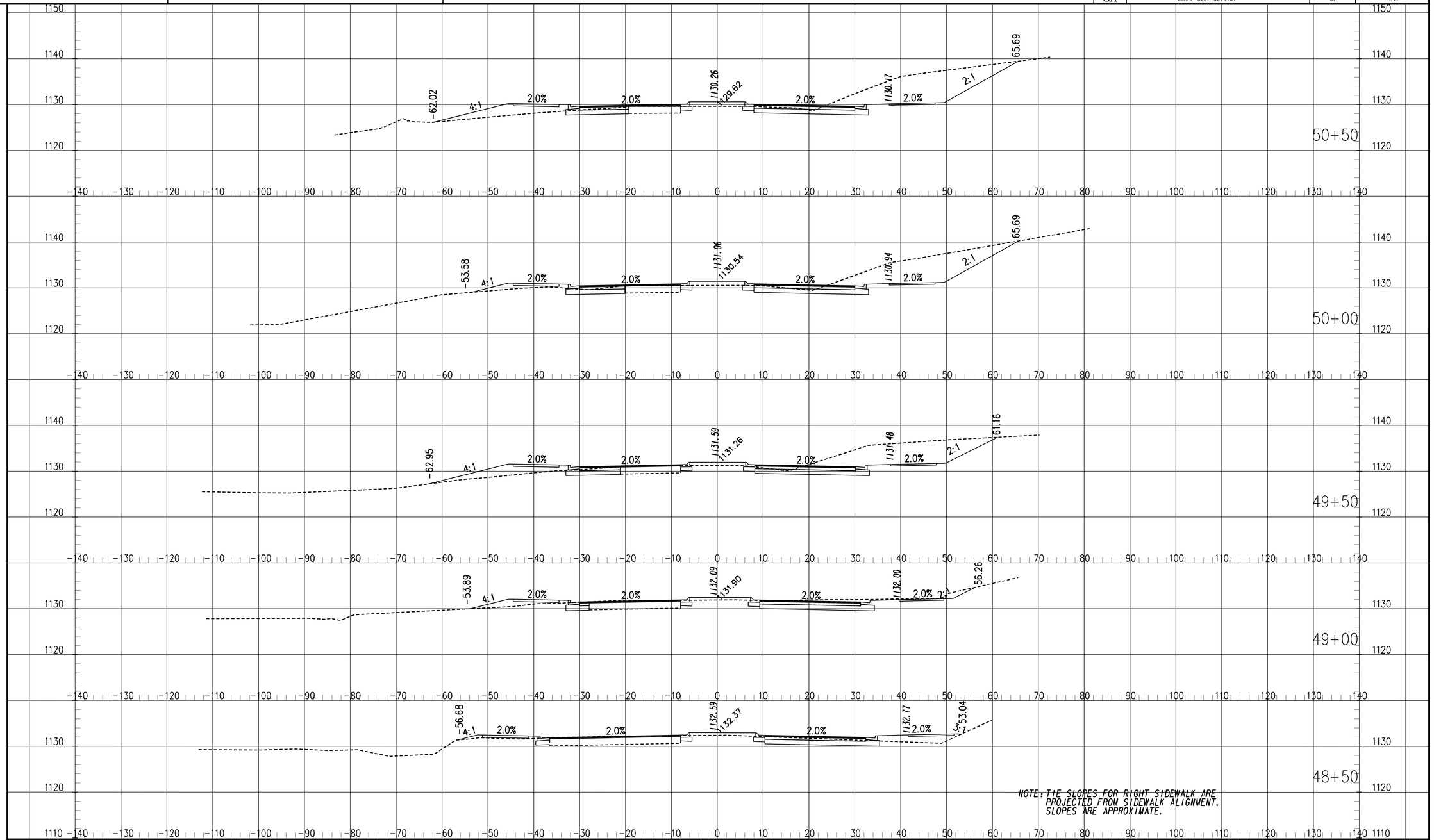
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-006

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-001(310)	67	241



NOTE: TIE SLOPES FOR RIGHT SIDEWALK ARE PROJECTED FROM SIDEWALK ALIGNMENT. SLOPES ARE APPROXIMATE.

Johns Creek

Stantec

SCALE: 1" = 10' HORIZ

1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

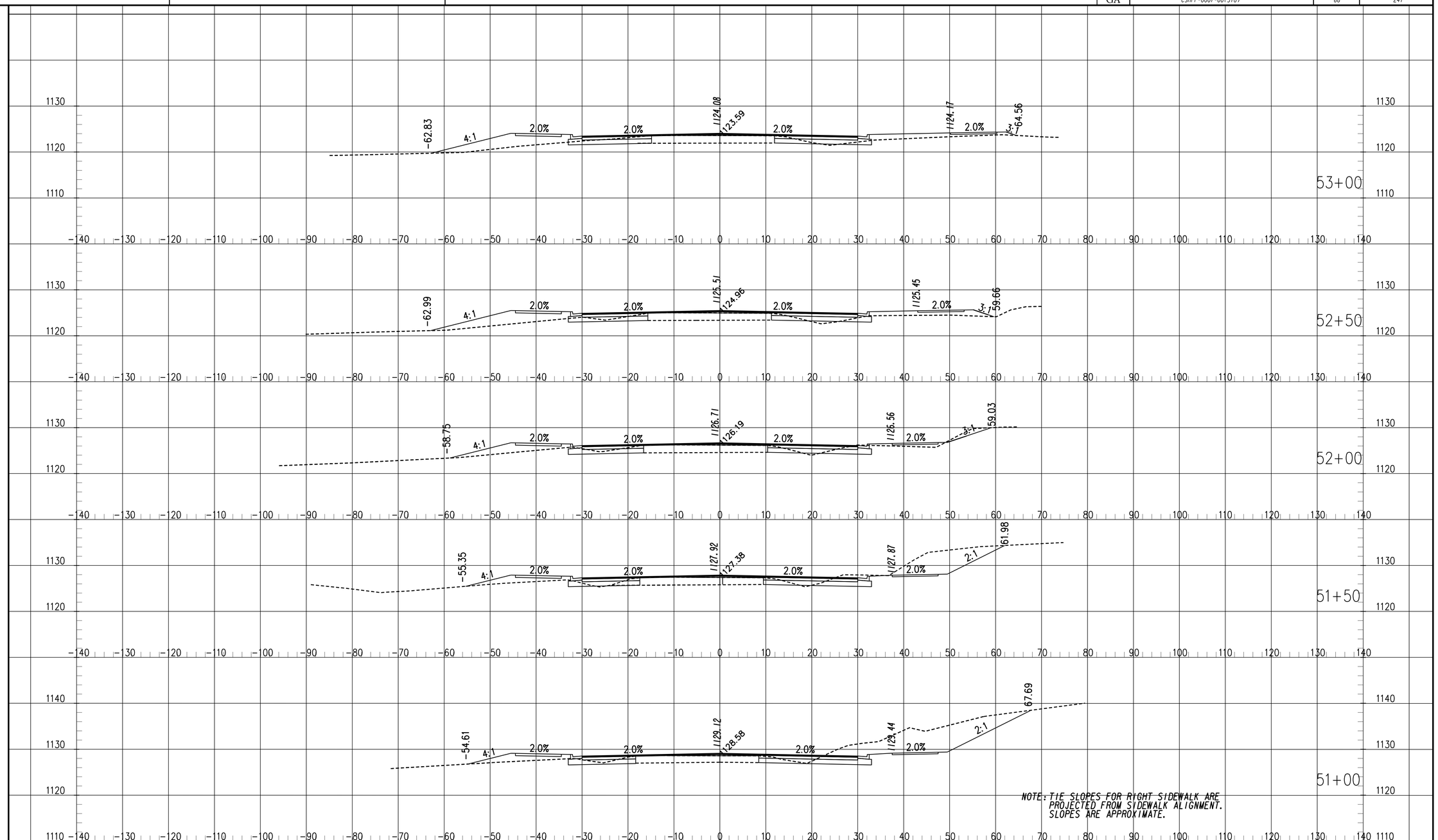
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-001(310) 06/17/2015

DRAWING No. 23-007

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

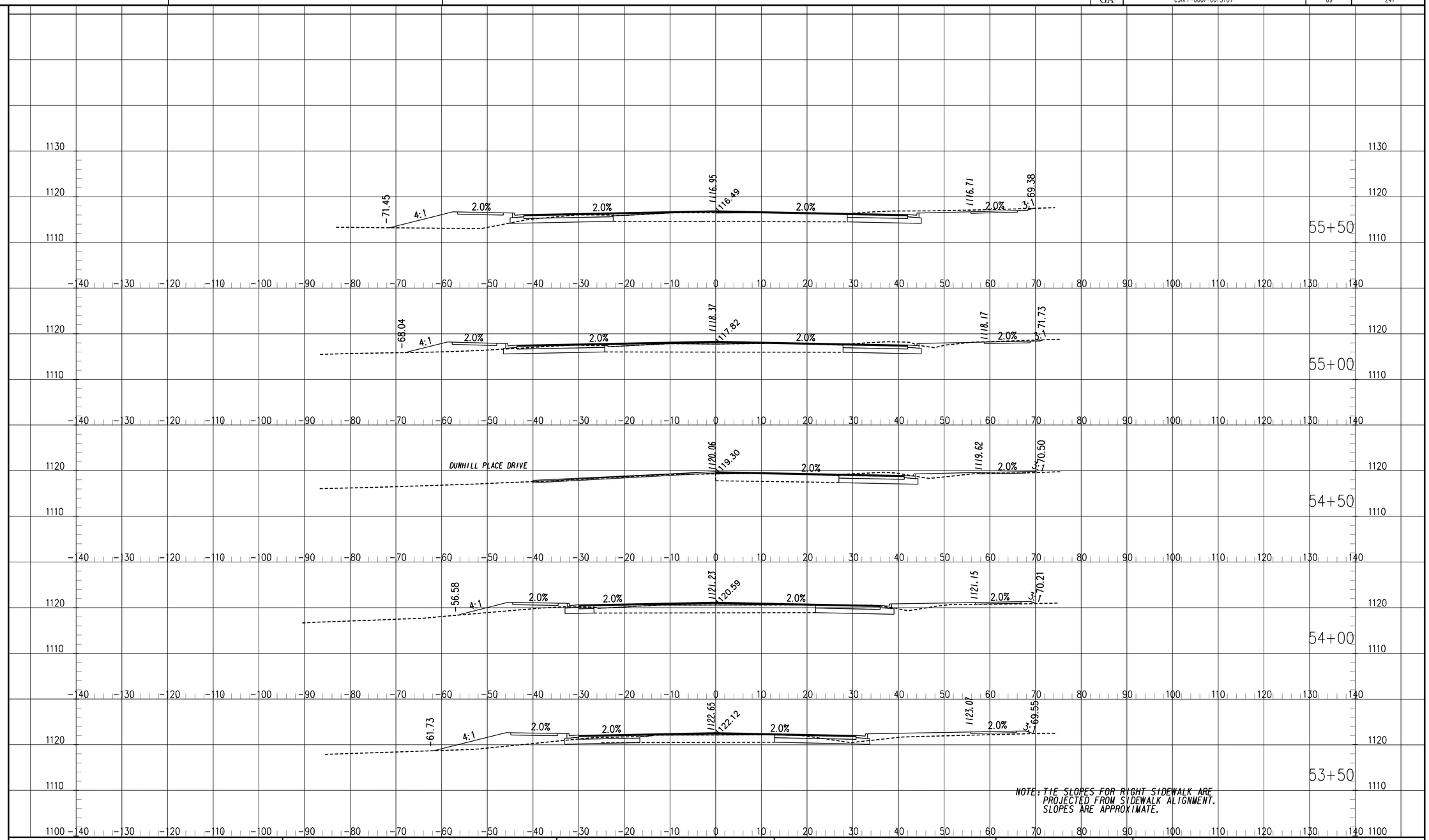
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-008

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-001(310)	69	241



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ

1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

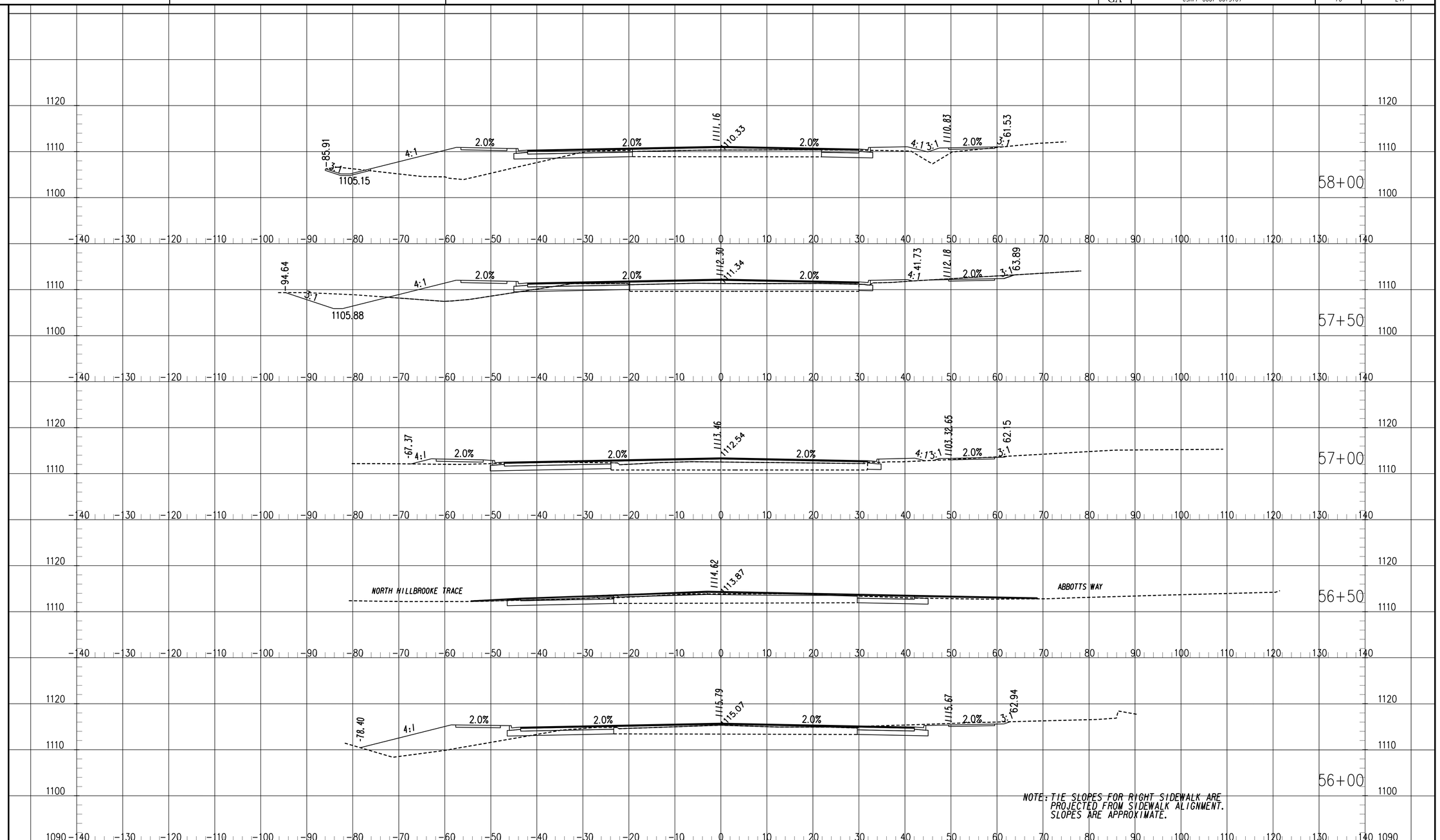
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-001(310) 06/17/2015

DRAWING No. 23-009

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

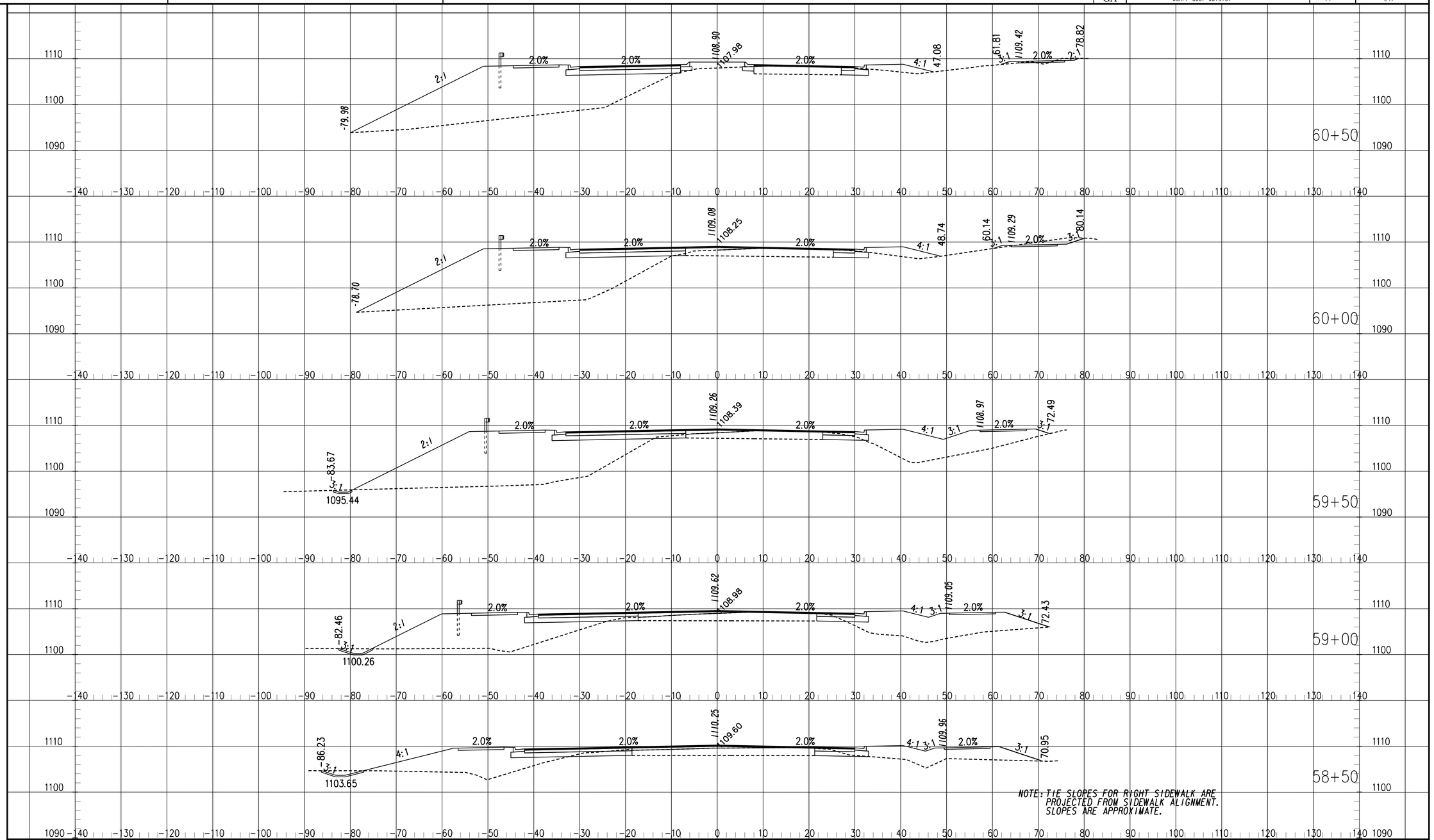
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-010

11/30/2011 SUXSEW



NOTE: TIE SLOPES FOR RIGHT SIDEWALK ARE PROJECTED FROM SIDEWALK ALIGNMENT. SLOPES ARE APPROXIMATE.

Johns Creek

Stantec

SCALE: 1" = 10' HORIZ

1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

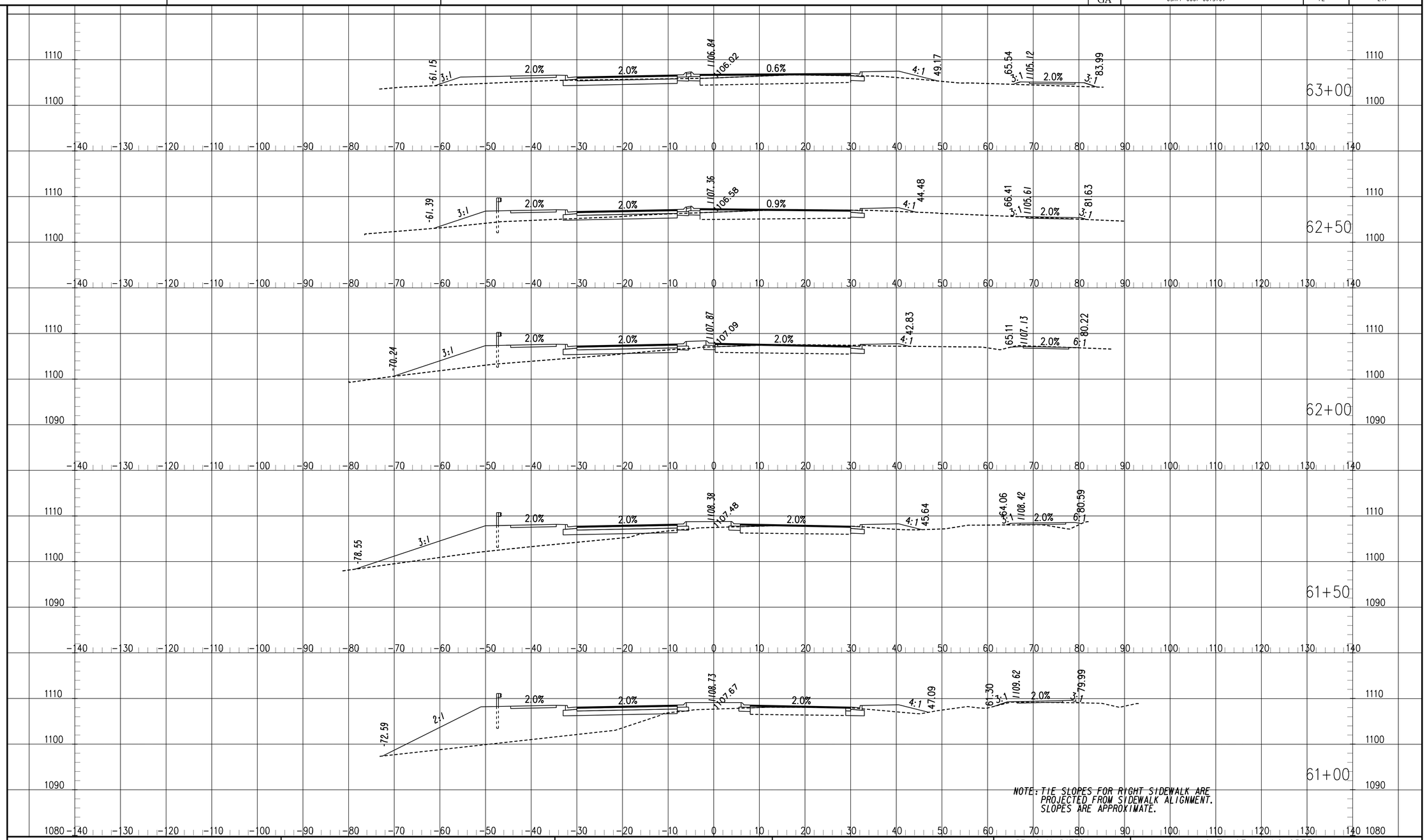
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-011

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

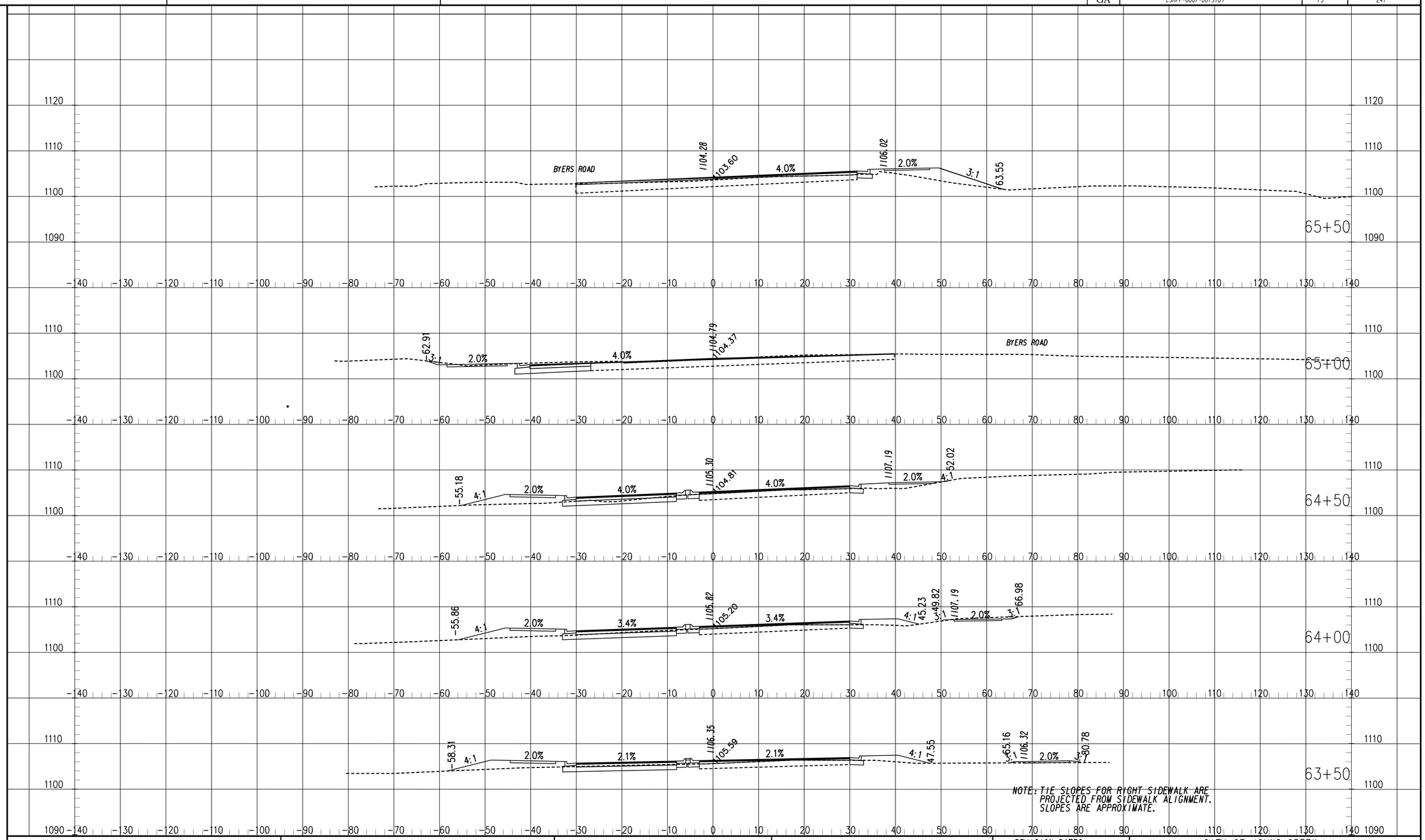
DRAWING No.
23-012

11/30/2011 SUXSEW

06/17/2015 6:24:47 PM $PRFB$ V:\1782\active\178202041\transportation\drawing\DGN\0007310_23.dgn

USER:blmackenzie

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	73	241



NOTE: TIE SLOPES FOR RIGHT SIDEWALK ARE PROJECTED FROM SIDEWALK ALIGNMENT. SLOPES ARE APPROXIMATE.

Johns Creek

Stantec

SCALE: 1" = 10' HORIZ

1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

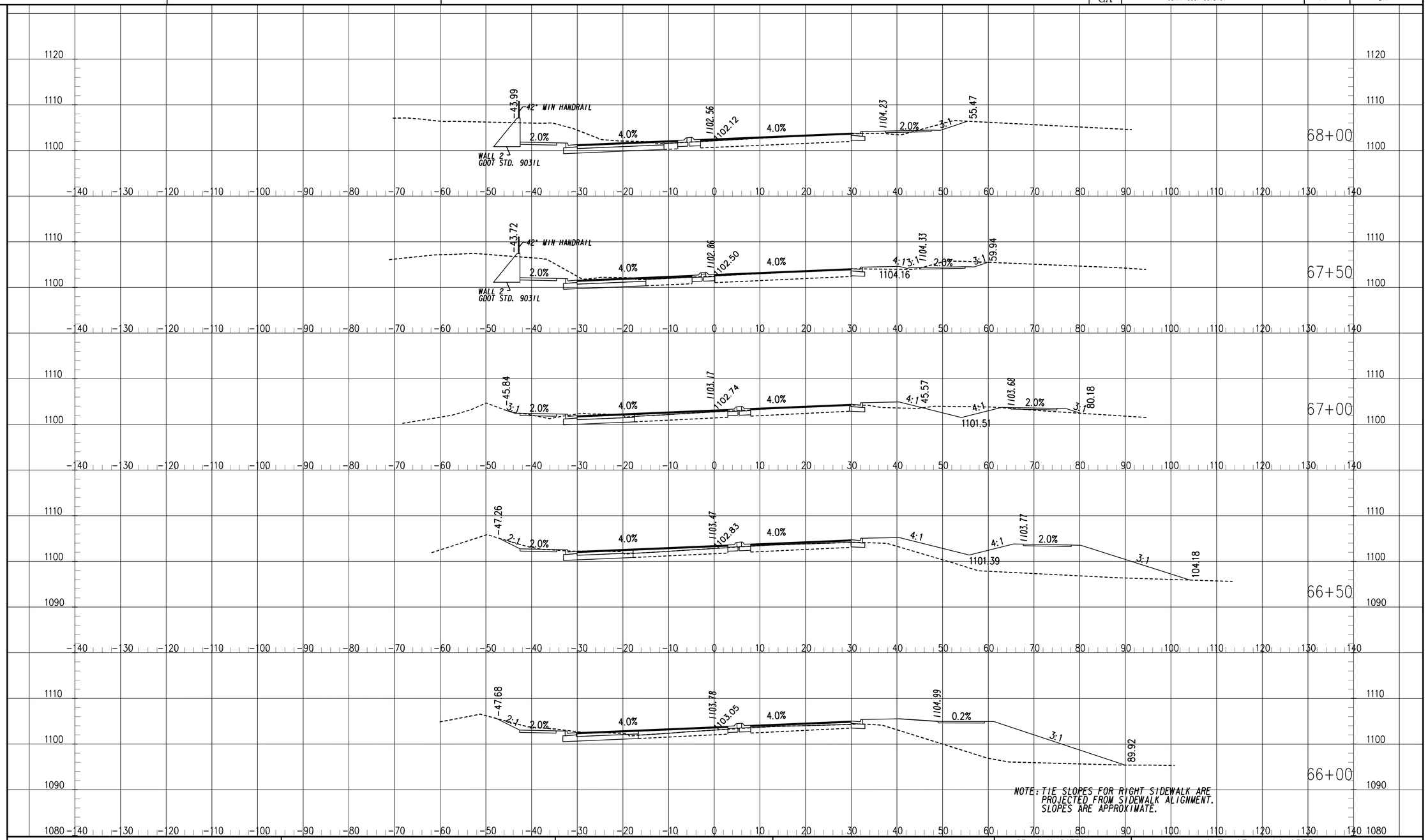
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-013

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

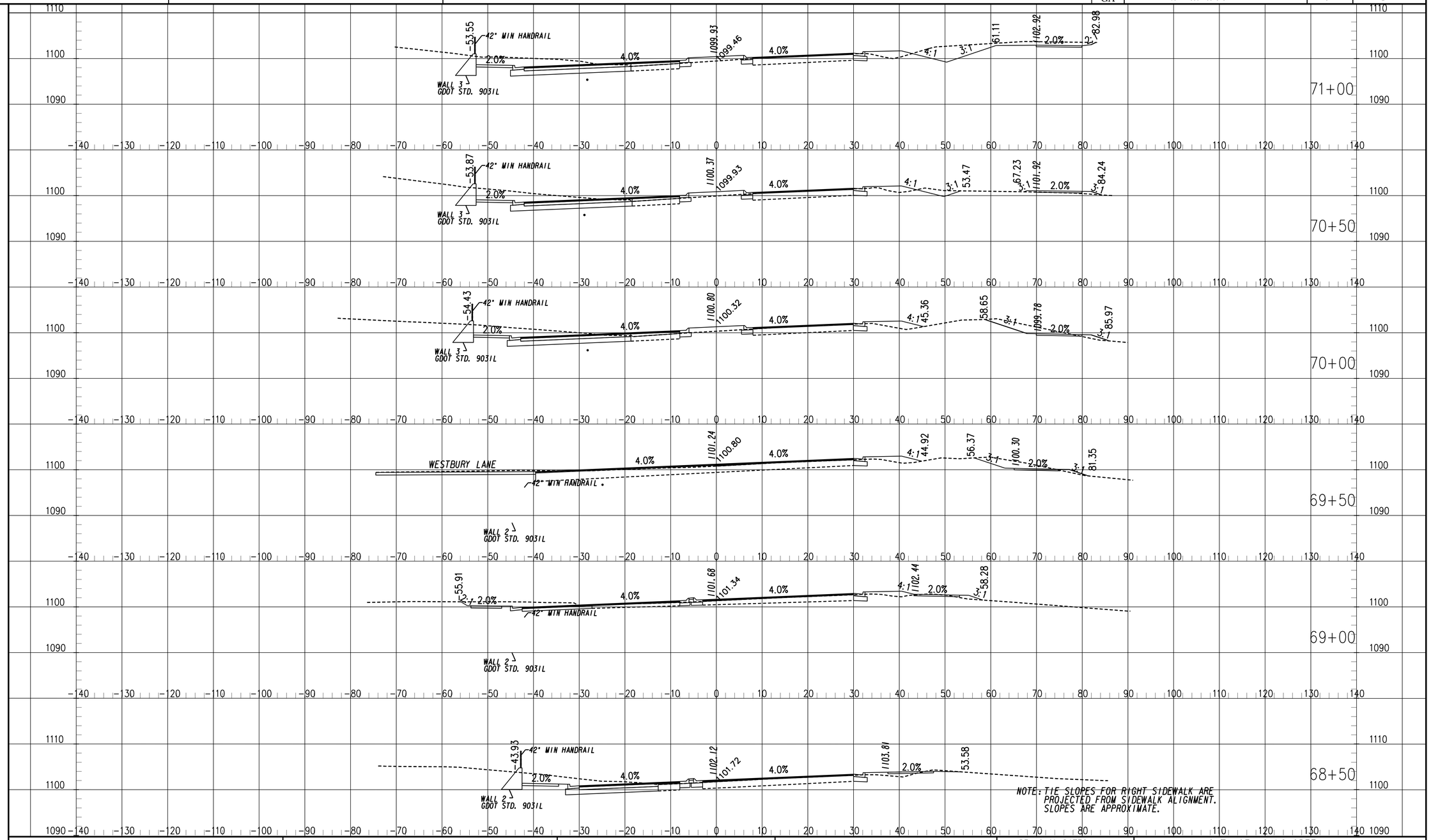
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-014

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	75	241



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

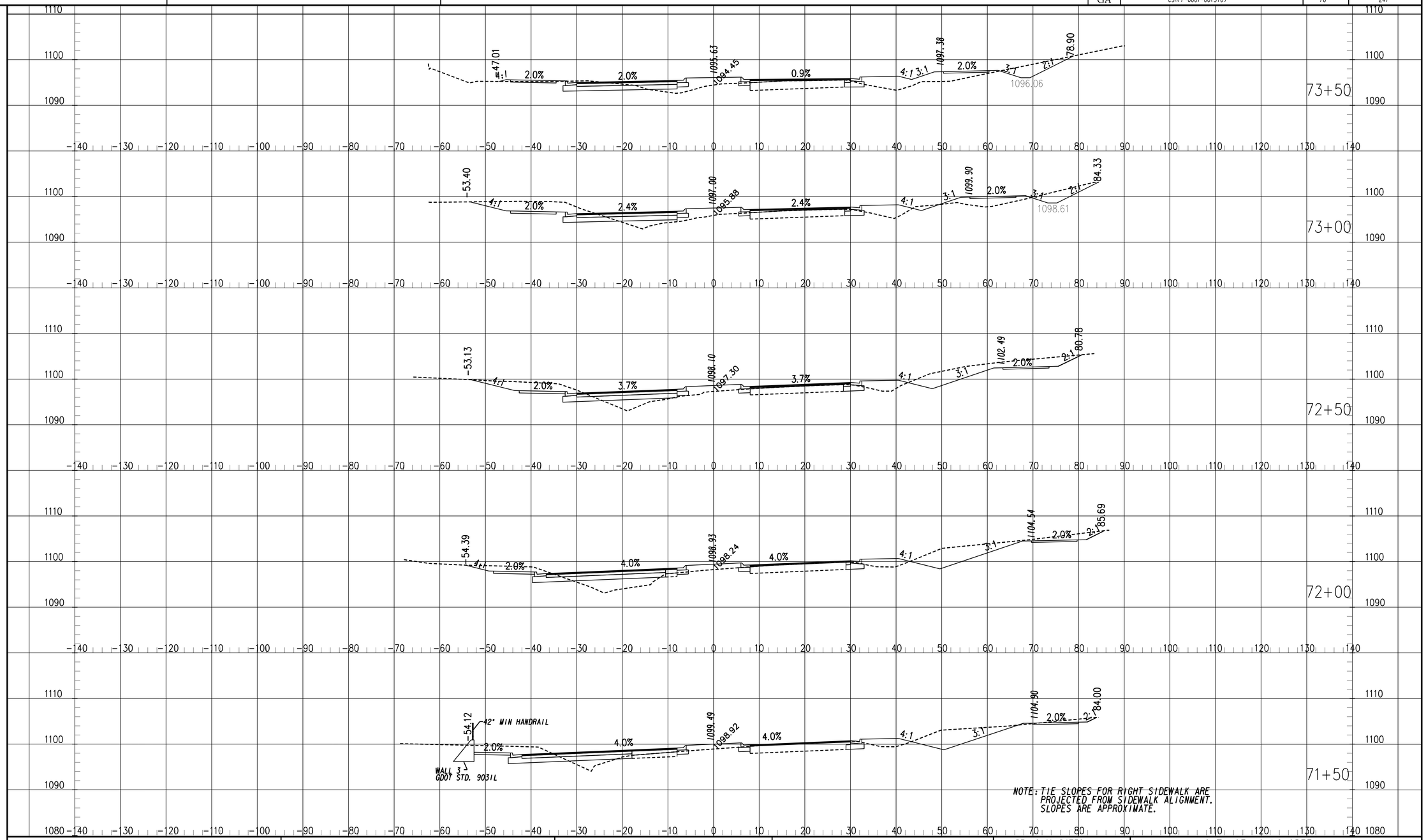
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-015

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

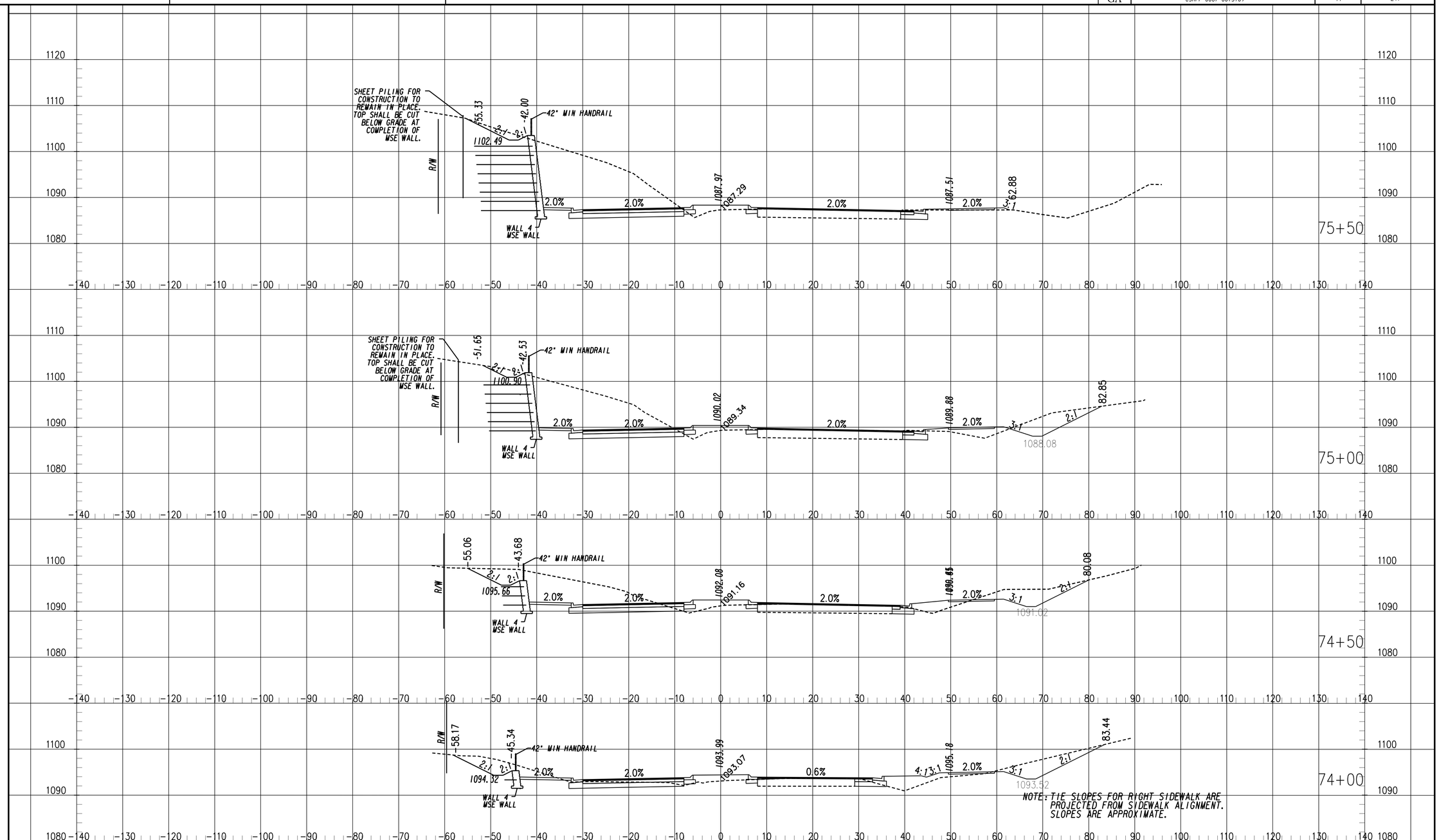
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-016

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

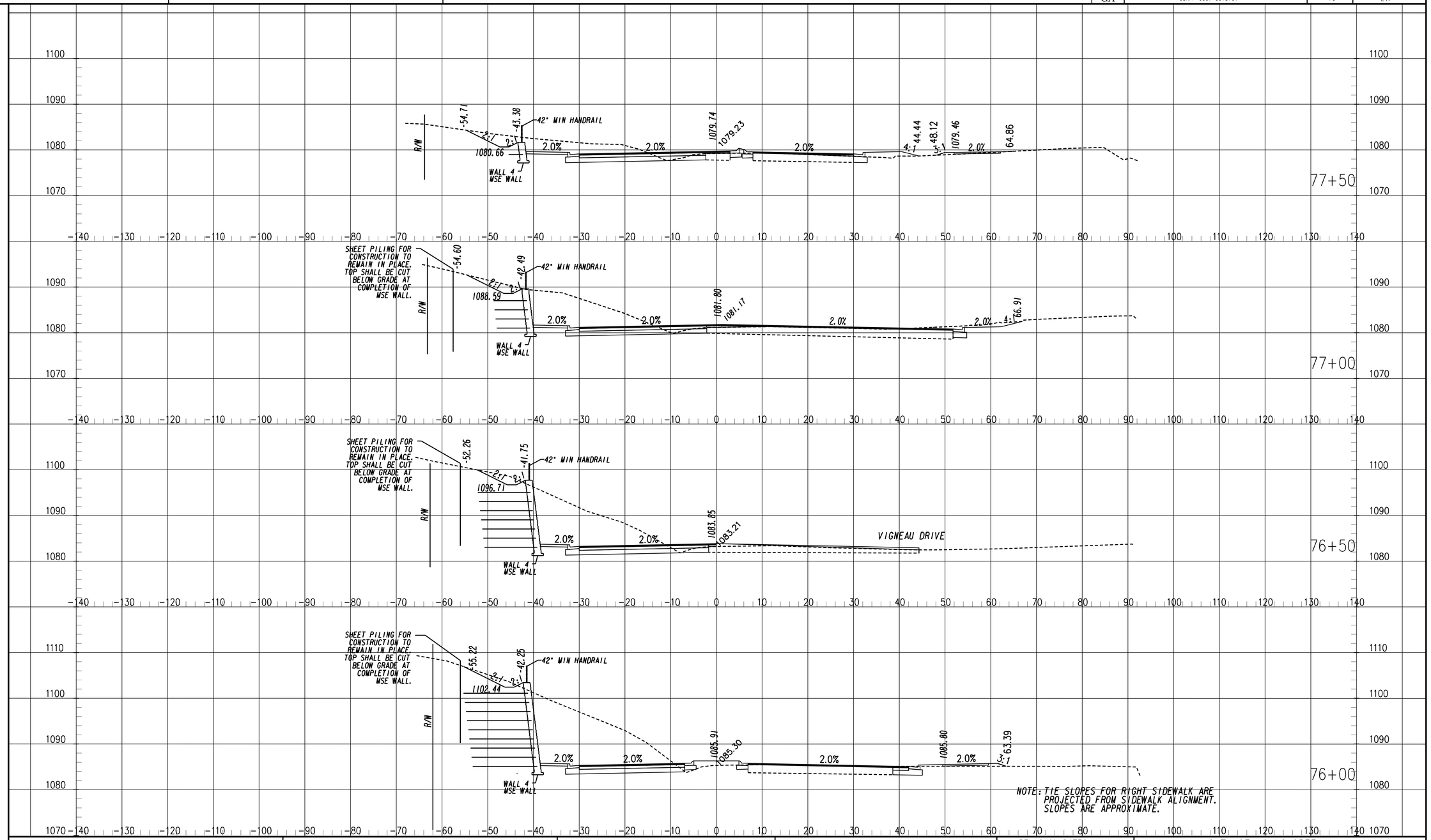
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-017

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

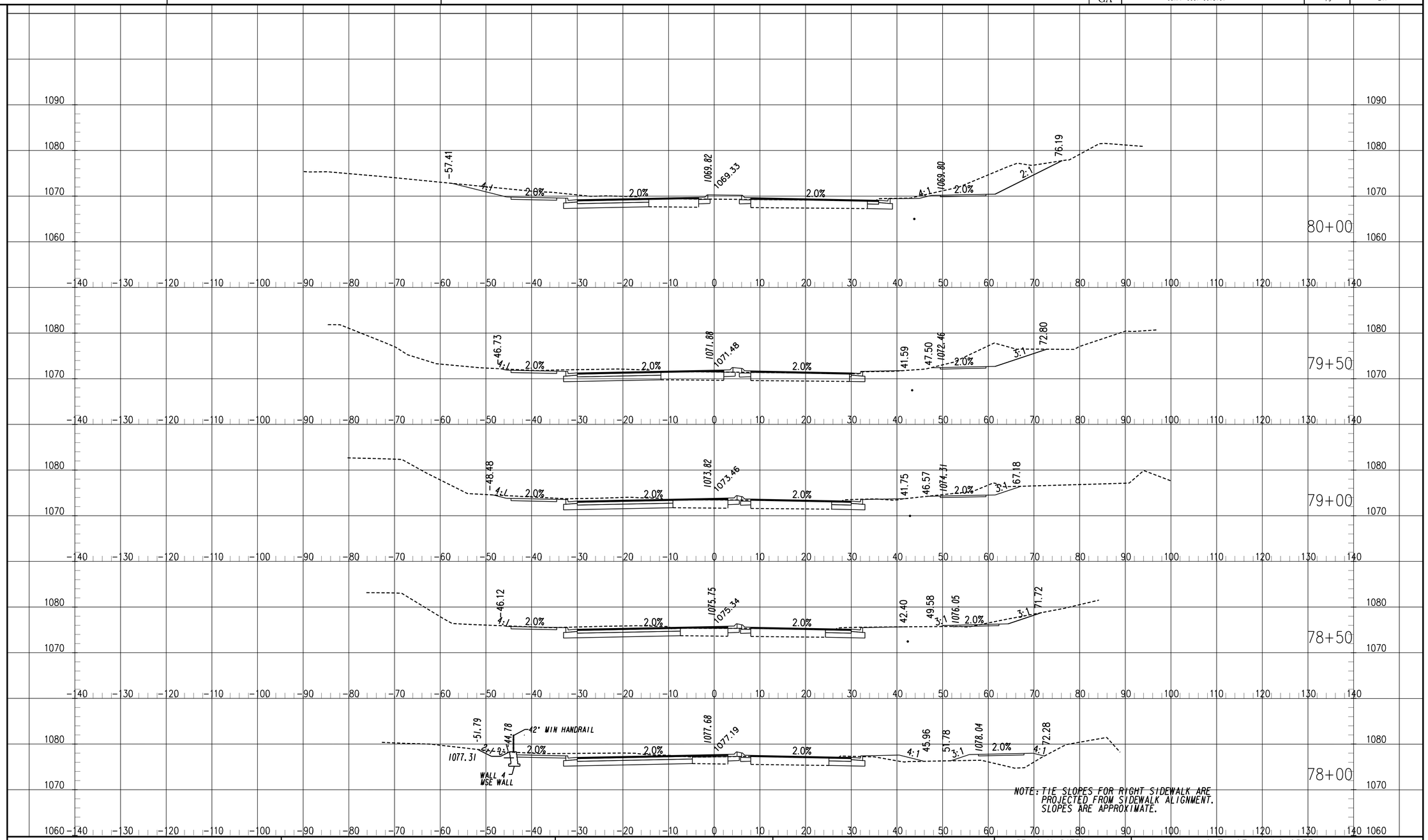
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-018

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	79	241



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

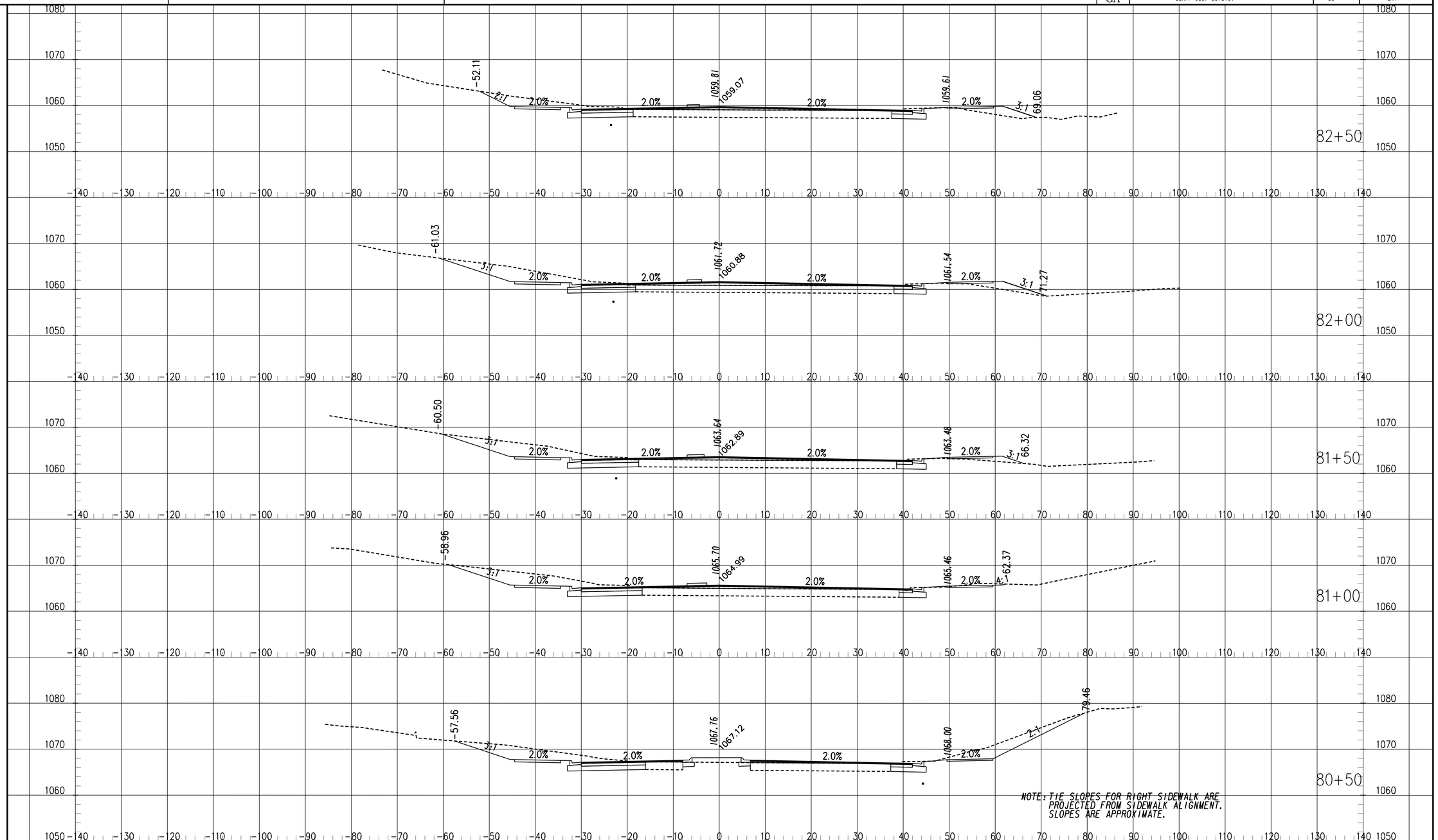
CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-019

11/30/2011 SUXSEW

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	80	241



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-020

11/30/2011 SUXSEW

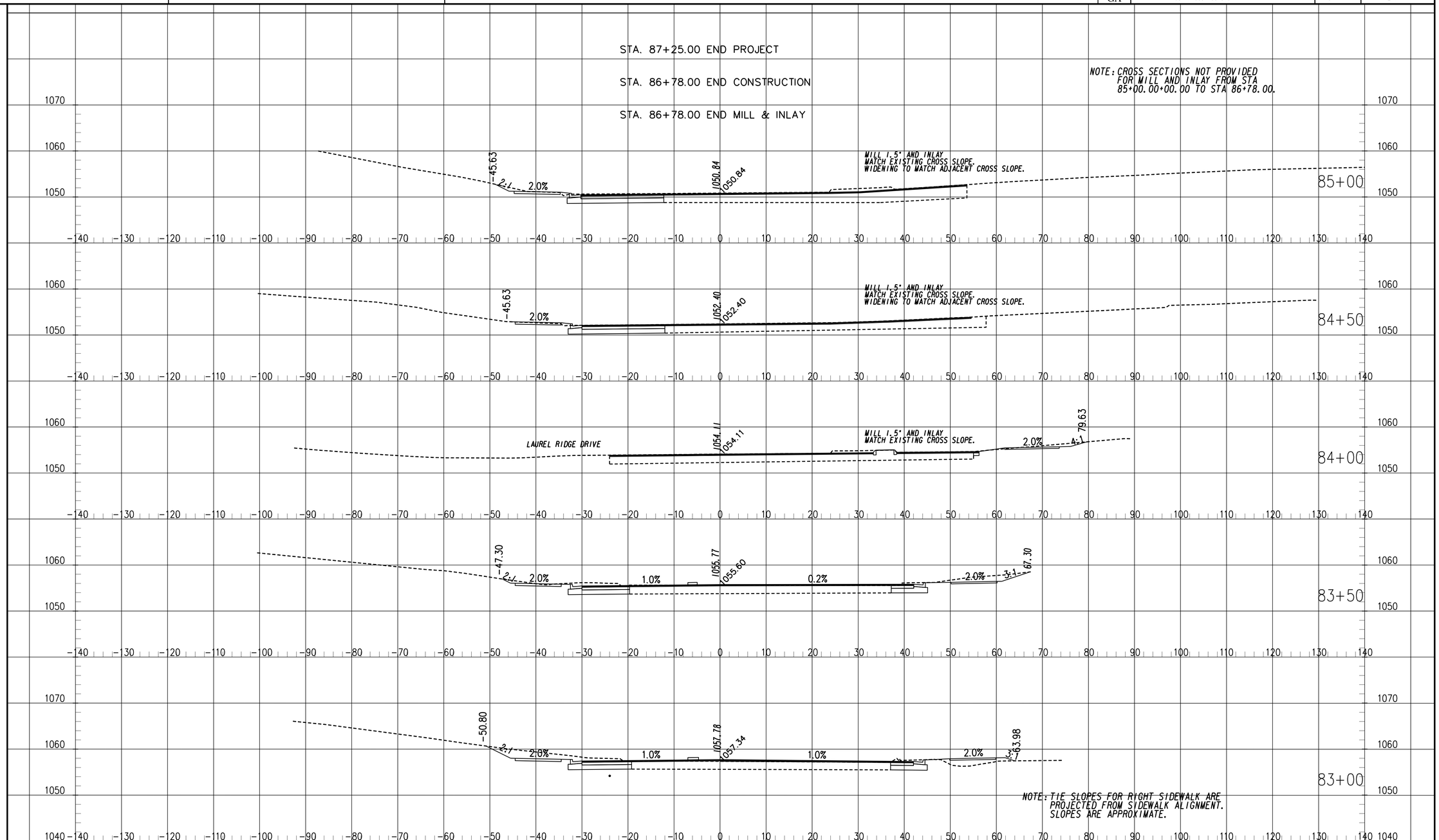
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	81	241

STA. 87+25.00 END PROJECT

STA. 86+78.00 END CONSTRUCTION

STA. 86+78.00 END MILL & INLAY

NOTE: CROSS SECTIONS NOT PROVIDED FOR MILL AND INLAY FROM STA 85+00.00+00.00 TO STA 86+78.00.



REVISION DATES	

Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

CITY OF JOHNS CREEK
PUBLIC WORKS

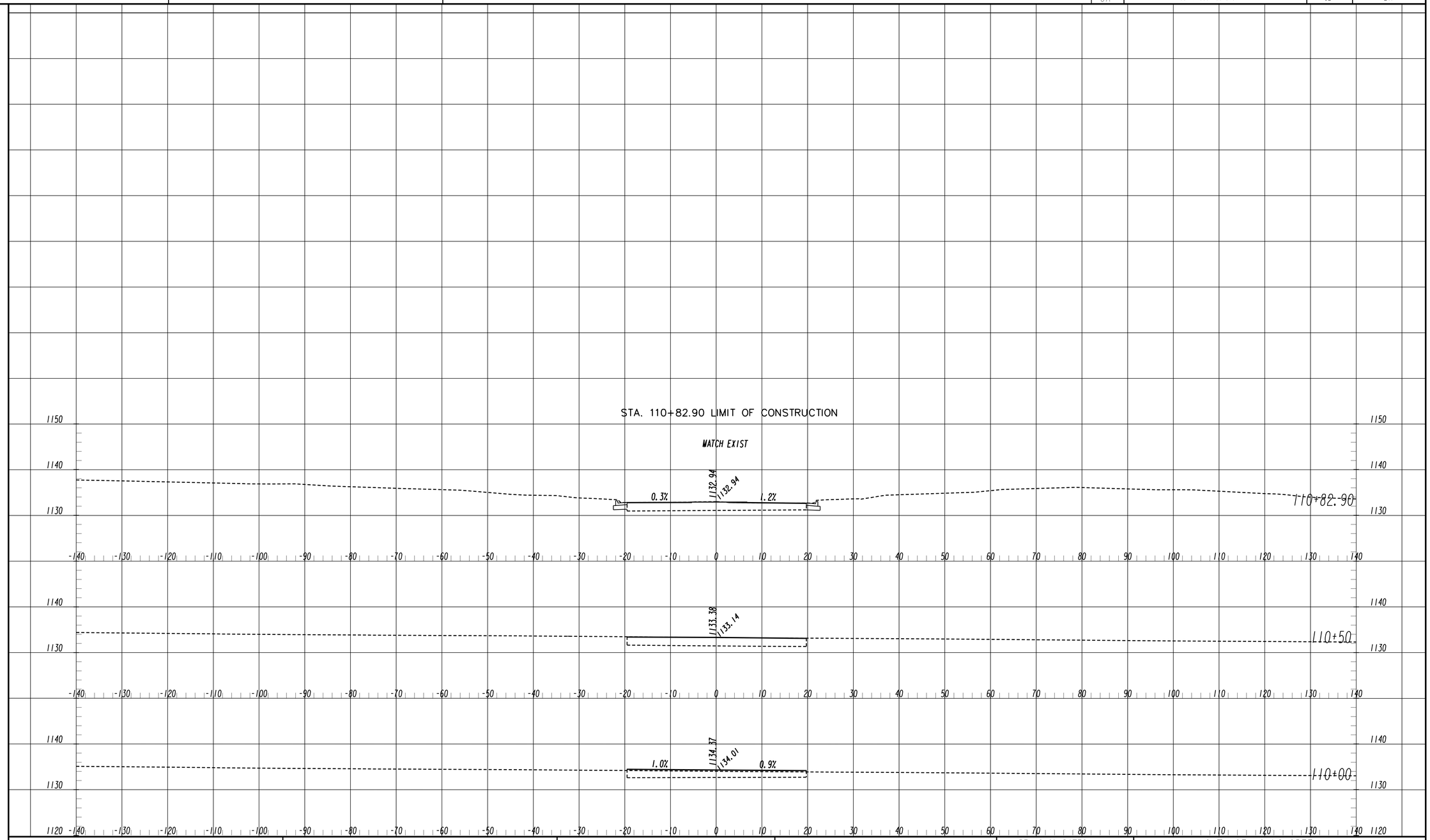
OFFICE:

CROSS SECTIONS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-021

11/30/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

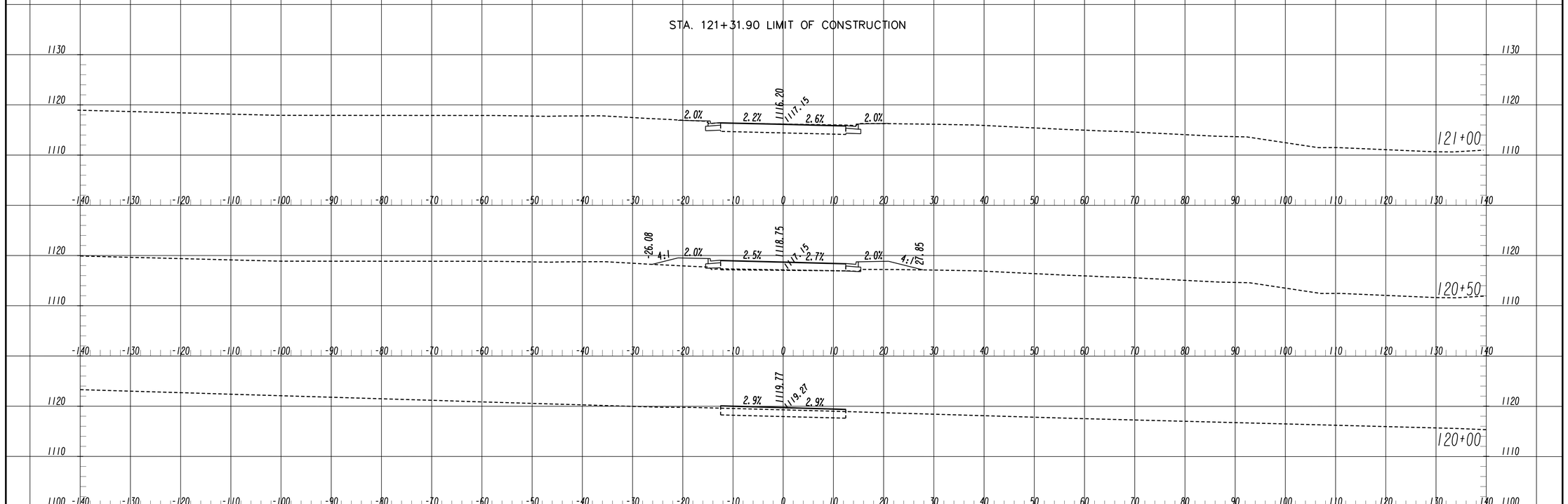
OFFICE:

CROSS SECTIONS
ADDISON LANE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-022

5/20/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

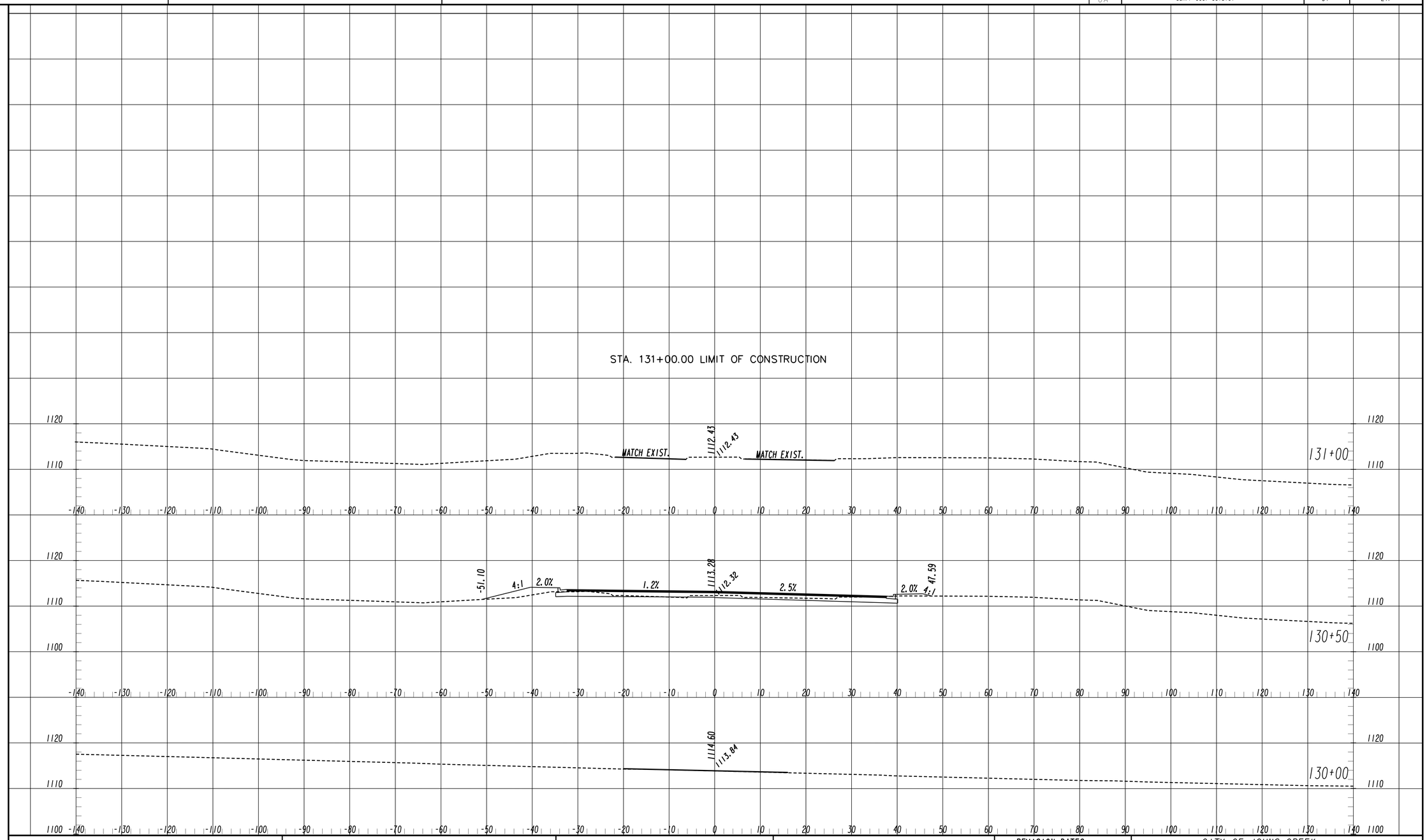
OFFICE:

CROSS SECTIONS
DUNHILL PLACE DRIVE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-001(310) 06/17/2015

DRAWING No.
23-023

5/20/2011 SUASEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

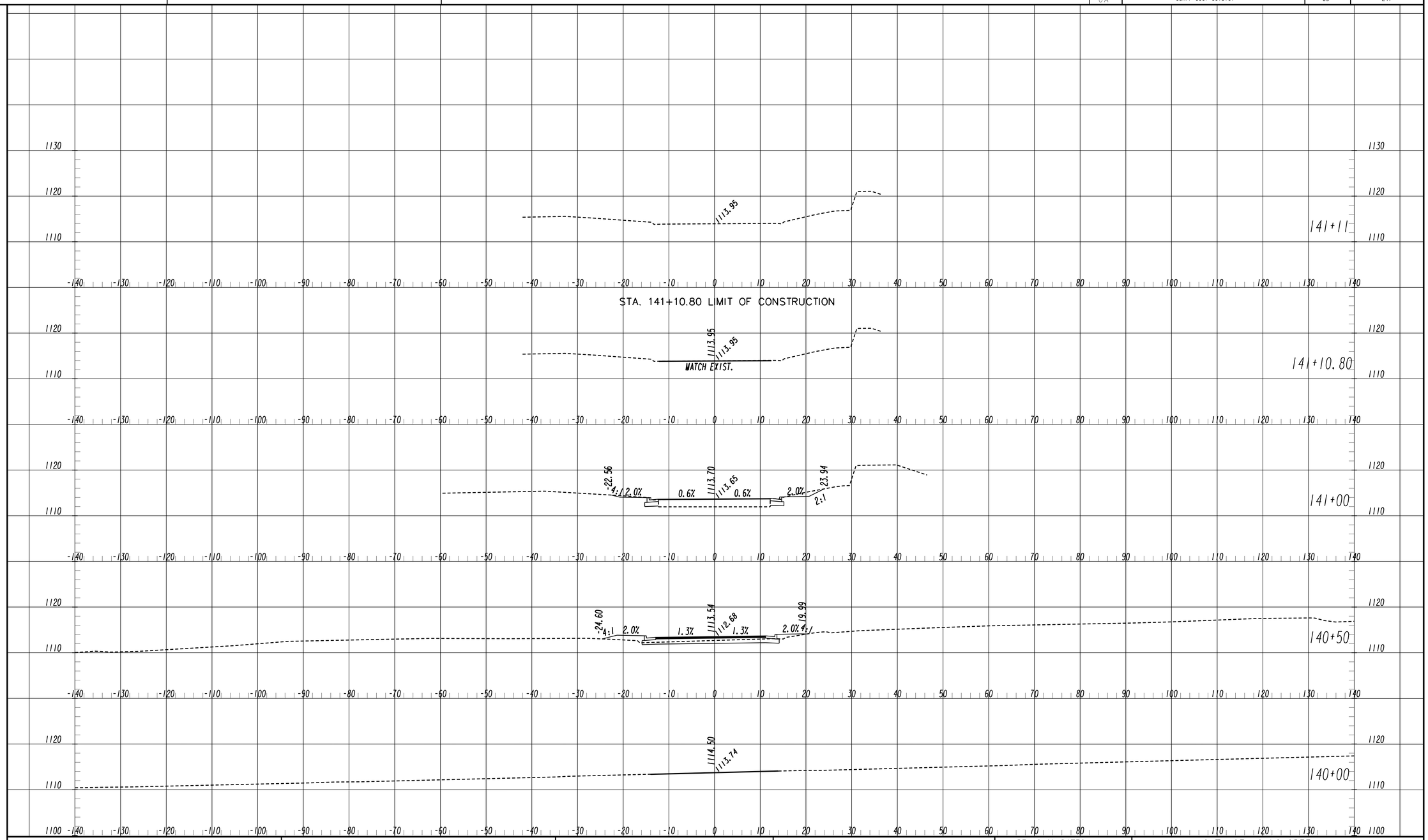
OFFICE:

CROSS SECTIONS
NORTH HILLBROOKE TRACE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 23-024

5/20/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

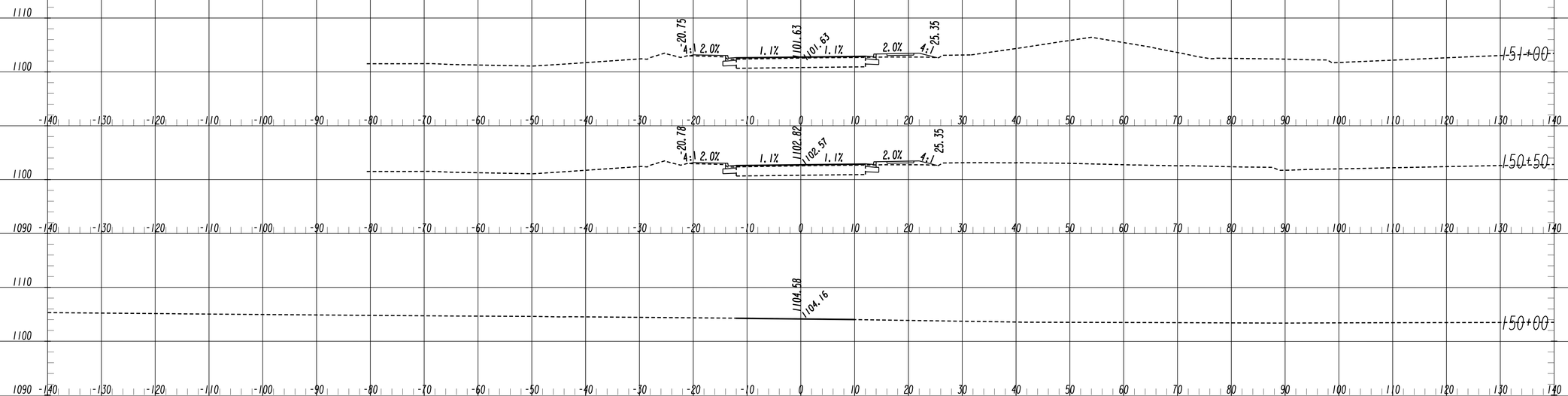
CROSS SECTIONS
ABBOTTS WAY

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-025

5/20/2011 SUXSEW

STA. 151+27.95 LIMIT OF CONSTRUCTION



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

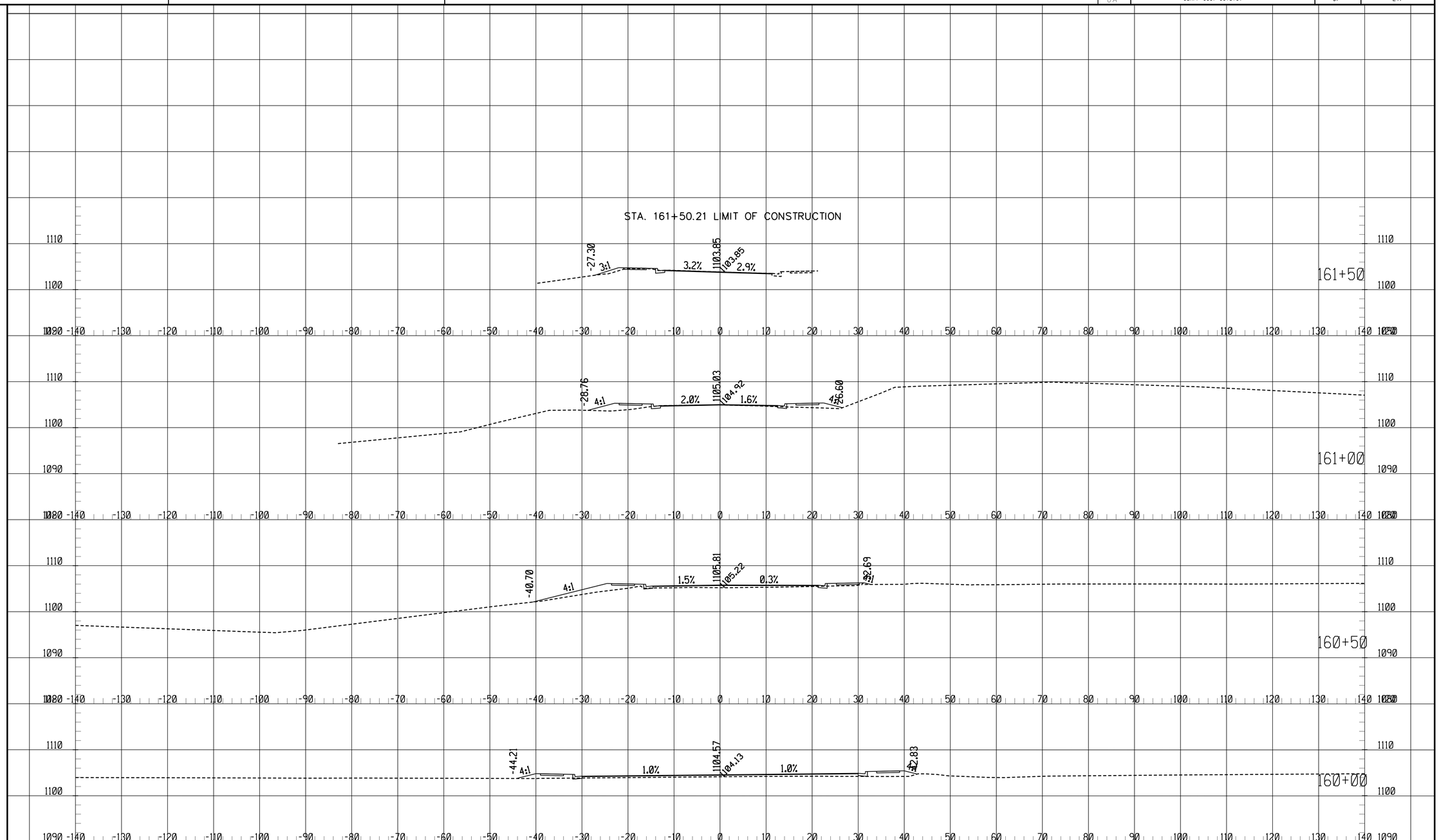
OFFICE:

CROSS SECTIONS
BYERS ROAD

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-026

5/20/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

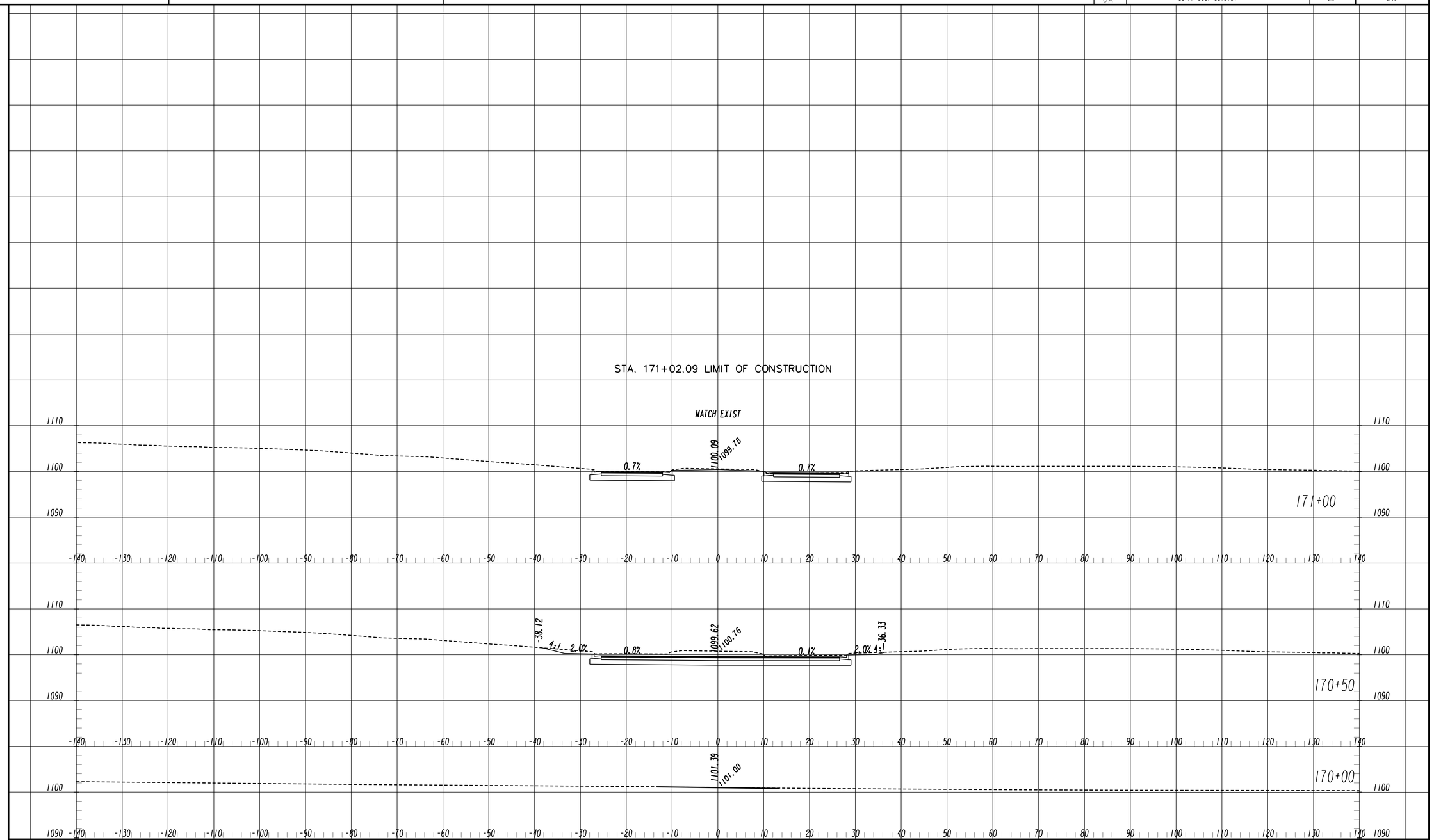
OFFICE:

CROSS SECTIONS
BYERS ROAD

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-027

5/20/2011 SUXSEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

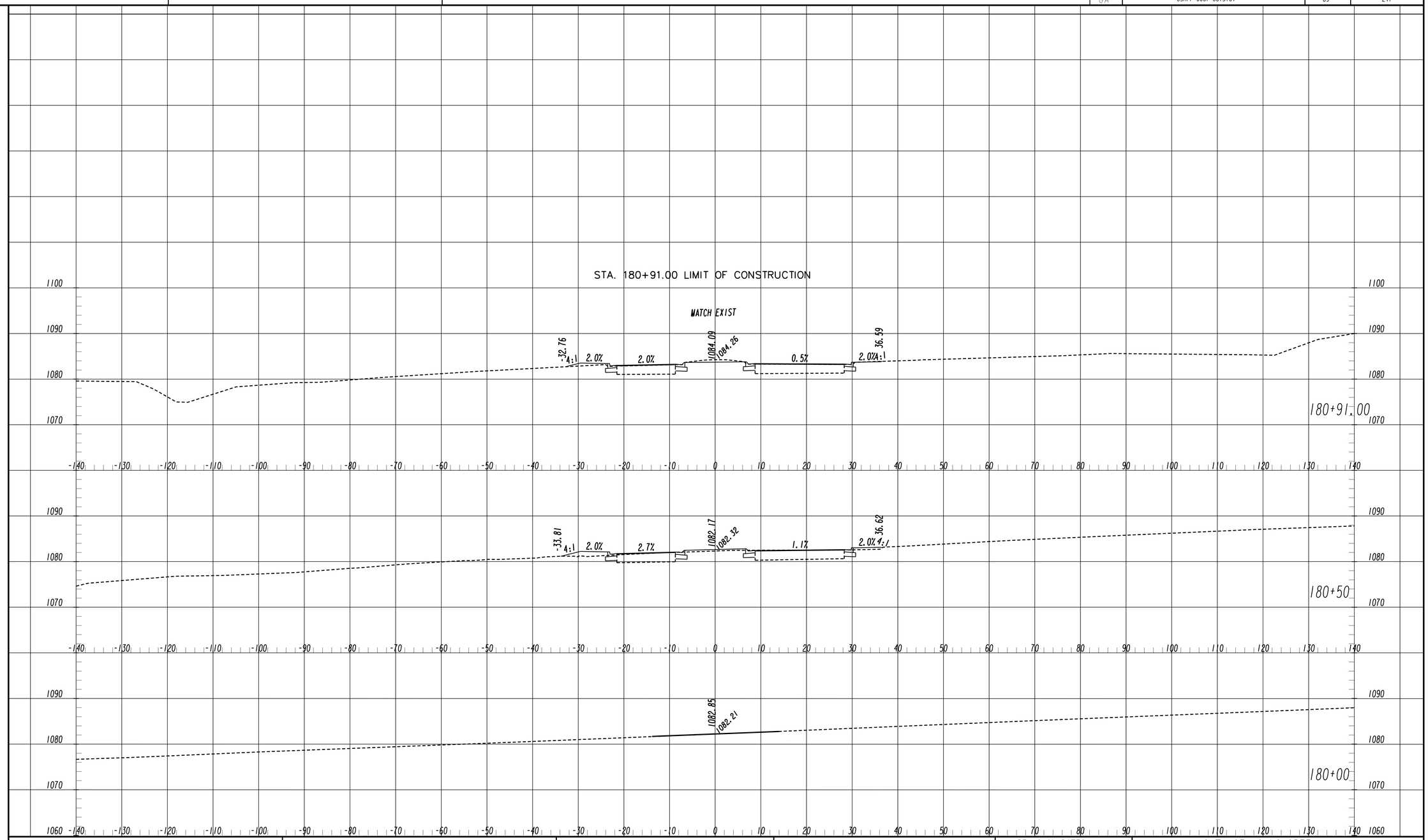
OFFICE:

CROSS SECTIONS
WESTBURY LANE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-001(310) 06/17/2015

DRAWING No.
23-028

5/20/2011 SUASEW



Johns Creek

Stantec

SCALE: 1" = 10' HORIZ
1" = 10' VERT

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

OFFICE:

CROSS SECTIONS
VIGNEAU DRIVE

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
23-029

5/20/2011 SUXSEW

EXISTING OVERHEAD	OVERHEAD TO BE REMOVED	PROPOSED OVERHEAD	TYPE OF UTILITY
E	E	E	ELECTRIC
E-T	E-T	E-T	ELECTRIC/TELECOMMUNICATIONS
E-TV	E-TV	E-TV	ELECTRIC/CABLE TV
E-TC	E-TC	E-TC	ELECTRIC/TRAFFIC CONTROL
E-T-TV	E-T-TV	E-T-TV	ELECTRIC/TELECOMMUNICATIONS/CABLE TV
E-T-TV-TC	E-T-TV-TC	E-T-TV-TC	ELECTRIC/TELECOMMUNICATIONS/CABLE TV/TRAFFIC CONTROL
E-TV-TC	E-TV-TC	E-TV-TC	ELECTRIC/CABLE TV/TRAFFIC CONTROL
E-T-TC	E-T-TC	T-TV-TC	ELECTRIC/TELECOMMUNICATIONS/TRAFFIC CONTROL
GW	GW	GW	GUY WIRE
T	T	T	TELECOMMUNICATIONS
T-TC	T-TC	T-TC	TELECOMMUNICATIONS/TRAFFIC CONTROL
T-TV-TC	T-TV-TC	T-TV-TC	TELECOMMUNICATIONS/CABLE TV/TRAFFIC CONTROL
T-TV	T-TV	T-TV	TELECOMUNICATIONS/CABLE TV
TV	TV	TV	CABLE TV
TV-TC	TV-TC	TV-TC	CABLE TV/TRAFFIC CONTROL
TC	TC	TC	TRAFFIC CONTROL

EXISTING UNDERGROUND	UNDERGROUND TO BE REMOVED	PROPOSED UNDERGROUND	TYPE OF UTILITY
E	E	E	ELECTRIC (QL-D)
E(C)	E(C)		ELECTRIC (QL-C)
E(B)	E(B)		ELECTRIC (QL-B)
T	T	T	TELECOMMUNICATIONS (QL-D)
T(C)	T(C)		TELECOMMUNICATIONS (QL-C)
T(B)	T(B)		TELECOMMUNICATIONS (QL-B)
TV	TV	TV	CABLE TV (QL-D)
TV(C)	TV(C)		CABLE TV (QL-C)
TV(B)	TV(B)		CABLE TV (QL-B)
W	W	W	WATER (QL-D)
W(C)	W(C)		WATER (QL-C)
W(B)	W(B)		WATER (QL-B)
**W	**W	**W	WATER FOR LABELED PIPE SIZES (QL-D)
**W(C)	**W(C)		WATER FOR LABELED PIPE SIZES (QL-C)
**W(B)	**W(B)		WATER FOR LABELED PIPE SIZES (QL-B)
NW	NW	NW	NON-POTABLE WATER (QL-D)
NW(C)	NW(C)		NON-POTABLE WATER (QL-C)
NW(B)	NW(B)		NON-POTABLE WATER (QL-B)
**NW	**NW	**NW	NON-POTABLE WATER FOR LABELED PIPE SIZES (QL-D)
**NW(C)	**NW(C)		NON-POTABLE WATER FOR LABELED PIPE SIZES (QL-C)
**NW(B)	**NW(B)		NON-POTABLE WATER FOR LABELED PIPE SIZES (QL-B)
STM	STM	STM	STEAM (QL-D)
STM(C)	STM(C)		STEAM (QL-C)
STM(B)	STM(B)		STEAM (QL-B)
**STM	**STM	**STM	STEAM FOR LABELED PIPE SIZES (QL-D)
**STM(C)	**STM(C)		STEAM FOR LABELED PIPE SIZES (QL-C)
**STM(B)	**STM(B)		STEAM FOR LABELED PIPE SIZES (QL-B)
SS	SS	SS	SANITARY SEWER WITH FLOW DIRECTION (QL-D)
SS(C)	SS(C)		SANITARY SEWER WITH FLOW DIRECTION (QL-C)
SS(B)	SS(B)		SANITARY SEWER WITH FLOW DIRECTION (QL-B)
**SS	**SS	**SS	SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (QL-D)
**SS(C)	**SS(C)		SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (QL-C)
**SS(B)	**SS(BI		SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (QL-B)
SFM	SFM	SFM	SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (QL-D)
SFM(C)	SFM(C)		SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (QL-C)
SFM(B)	SFM(B)		SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (QL-B)
G	G	G	GAS (QL-D)
G(C)	G(C)		GAS (QL-C)
G(B)	G(B)		GAS (QL-B)
**G	**G	**G	GAS FOR LABELED PIPE SIZES (QL-D)
**G(C)	**G(C)		GAS FOR LABELED PIPE SIZES (QL-C)
**G(B)	**G(B)		GAS FOR LABELED PIPE SIZES (QL-B)
P	P	P	PETROLEUM (QL-D)
P(C)	P(C)		PETROLEUM (QL-C)
P(B)	P(B)		PETROLEUM (QL-B)
**P	**P	**P	PETROLEUM FOR LABELED PIPE SIZES (QL-D)
**P(C)	**P(C)		PETROLEUM FOR LABELED PIPE SIZES (QL-C)
**P(B)	**P(B)		PETROLEUM FOR LABELED PIPE SIZES (QL-B)
TC	TC	TC	TRAFFIC CONTROL (QL-D)
TC(C)	TC(C)		TRAFFIC CONTROL (QL-C)
TC(B)	TC(B)		TRAFFIC CONTROL (QL-B)
UNK(B)	UNK(B)		UNKNOWN UTILITY FOUND IN SUE INVESTIGATION (QL-B)

UTILITY LEGEND

UTILITY CELLS

EXISTING	PROPOSED	TEMPORARY	
E			ELECTRIC MANHOLE
H			HAND HOLE
E			TRANSFORMER
E			ELECTRIC METER
			UTILITY POLE/GUY POLE
			LIGHT POLE
			GUY ANCHOR
E			ELECTRIC BOX
			MARKER
T			TELECOMMUNICATIONS MANHOLE
T			TELECOMMUNICATIONS PEDESTAL
T			SPLICE BOX
SLG			SUBCRIBER LOOP CARRIER (aka "SLICK")
			CABINET
			PHONE BOOTH
			CABLE TV PEDESTAL
TV			CABLE TV MANHOLE
W			WATER VALVE
W			WATER METER
W			WATER MANHOLE
			FIRE HYDRANT ASSEMBLY (INCLUDES ASSOCIATED VALVE)
BFP			BACKFLOW PREVENTER
PIV			PRESSURE INDICATOR VALVE
ARV			AIR RELEASE VALVE

EXISTING	PROPOSED	TEMPORARY	
W			WELL
W			WATER VAULT
W			WATER VALVE MARKER
			STAND PIPE
			CLEANOUT
SS			SANITARY SEWER MANHOLE
ARV			AIR RELEASE VALVE
GT			GREASE TRAP
SF			SANITARY SEWER FORCE MAIN VALVE
			VENT
G			GAS VALVE
G			GAS METER
G			GAS MANHOLE
GPR			GAS PRESSURE REGULATOR
G			GAS VAULT
GTS			GAS TEST STATION
P			PETROLEUM VALVE

MISC.	
LOS TH	LIMITS OF OVERHEAD AND SUBSURFACE UTILITY INVESTIGATION
	TEST HOLE (QL-A ONLY)
EOI	END OF INFORMATION
	QUALITY LEVEL (QL) DELINEATION
123	POLE ID
A01	SANITARY SEWER MANHOLE (SSMH) ID

QUALITY LEVELS AND DEFINITIONS

QL-D DEPICTED ACCORDING TO UTILITY RECORD INFORMATION AND IN-FIELD VISUAL INSPECTION. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.

QL-C EXISTING UTILITY STRUCTURES HAVE BEEN FIELD LOCATED AND SURVEYED TO ASSIST IN DEPICTING THE UTILITIES SHOWN ON RECORDS. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.

QL-B INFORMATION WAS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROPRIATE HORIZONTAL POSITION OF THE SUBSURFACE UTILITIES. QL-B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.

QL-A OBTAIN PRECISE HORIZONTAL AND VERTICAL POSITION OF THE UTILITY LINE BY EXCAVATING A TEST HOLE. THE TEST HOLE SHALL BE DONE USING VACUUM EXCAVATION OR COMPARABLE NONDESTRUCTIVE EQUIPMENT IN A MANNER AS TO CAUSE NO DAMAGE TO THE UTILITY LINE. AFTER EXCAVATING A TEST HOLE, A FIELD SURVEY SHALL BE PERFORMED TO DETERMINE THE EXACT LOCATION AND POSITION OF THE UTILITY LINE.

TELEPHONE PAIR SIZE TABLE

TELEPHONE PAIR SIZE	TELEPHONE CABLE DIAMETER
5 - 100	0.50 TO 2.00 IN
101 - 2400	UP TO 3.50 IN

GEORGIA811 Utilities Protection Center, Inc
Know what's below. Call before you dig.

Johns Creek

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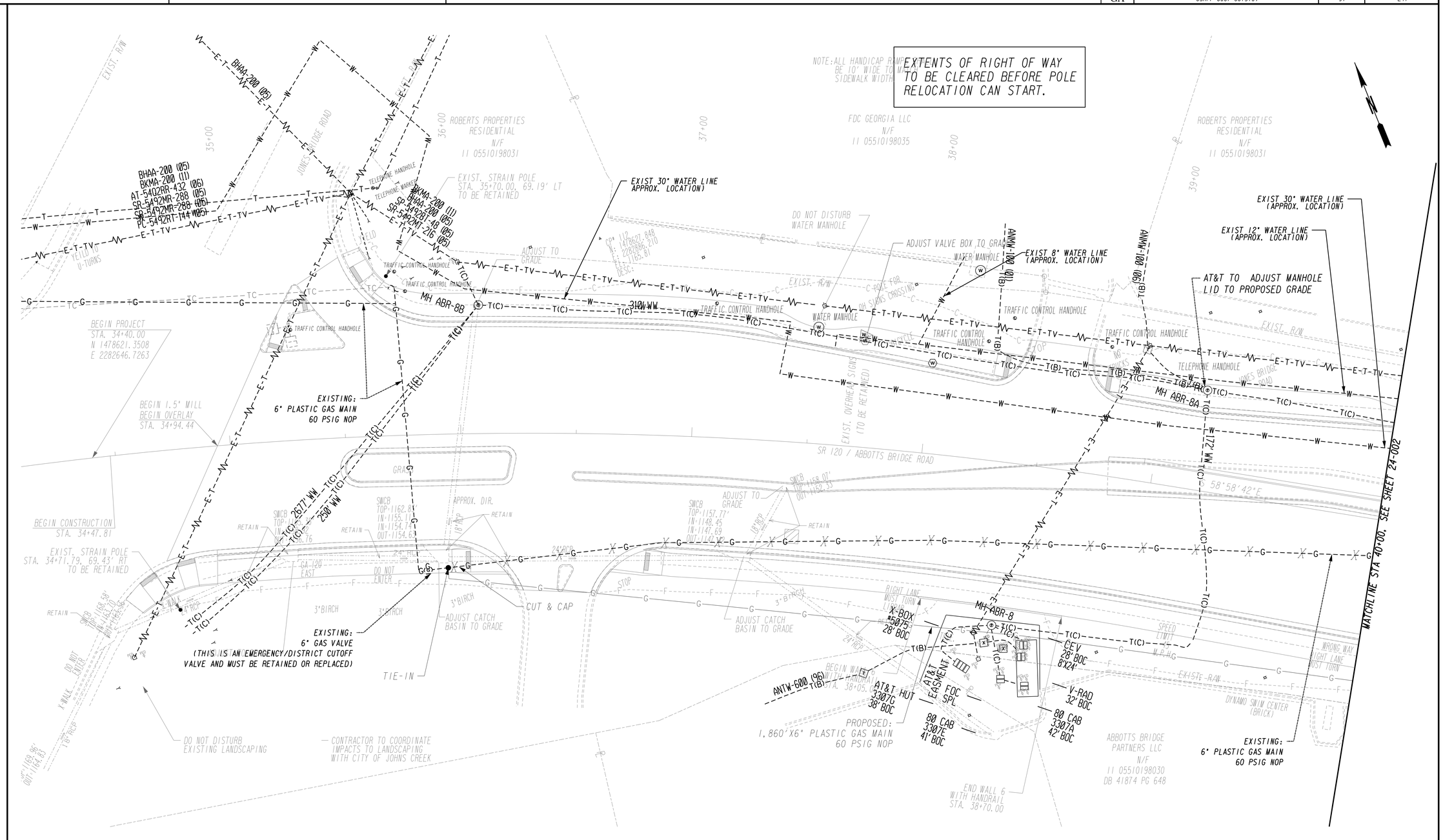
REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 24-000



REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

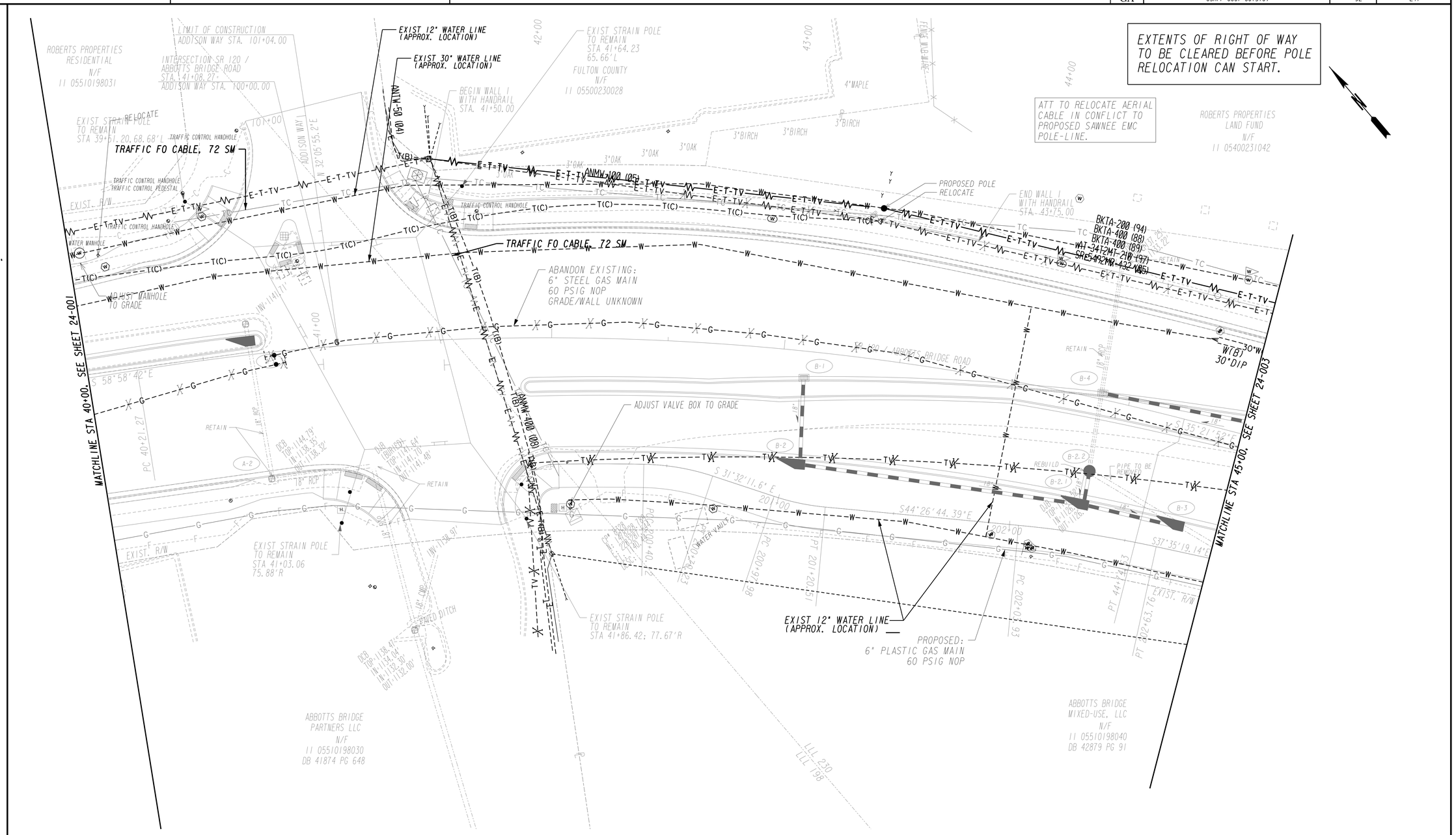
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 24-001

SCALE IN FEET
0 20 40 80

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	92	241



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SCALE IN FEET
0 20 40 80

REVISION DATES		

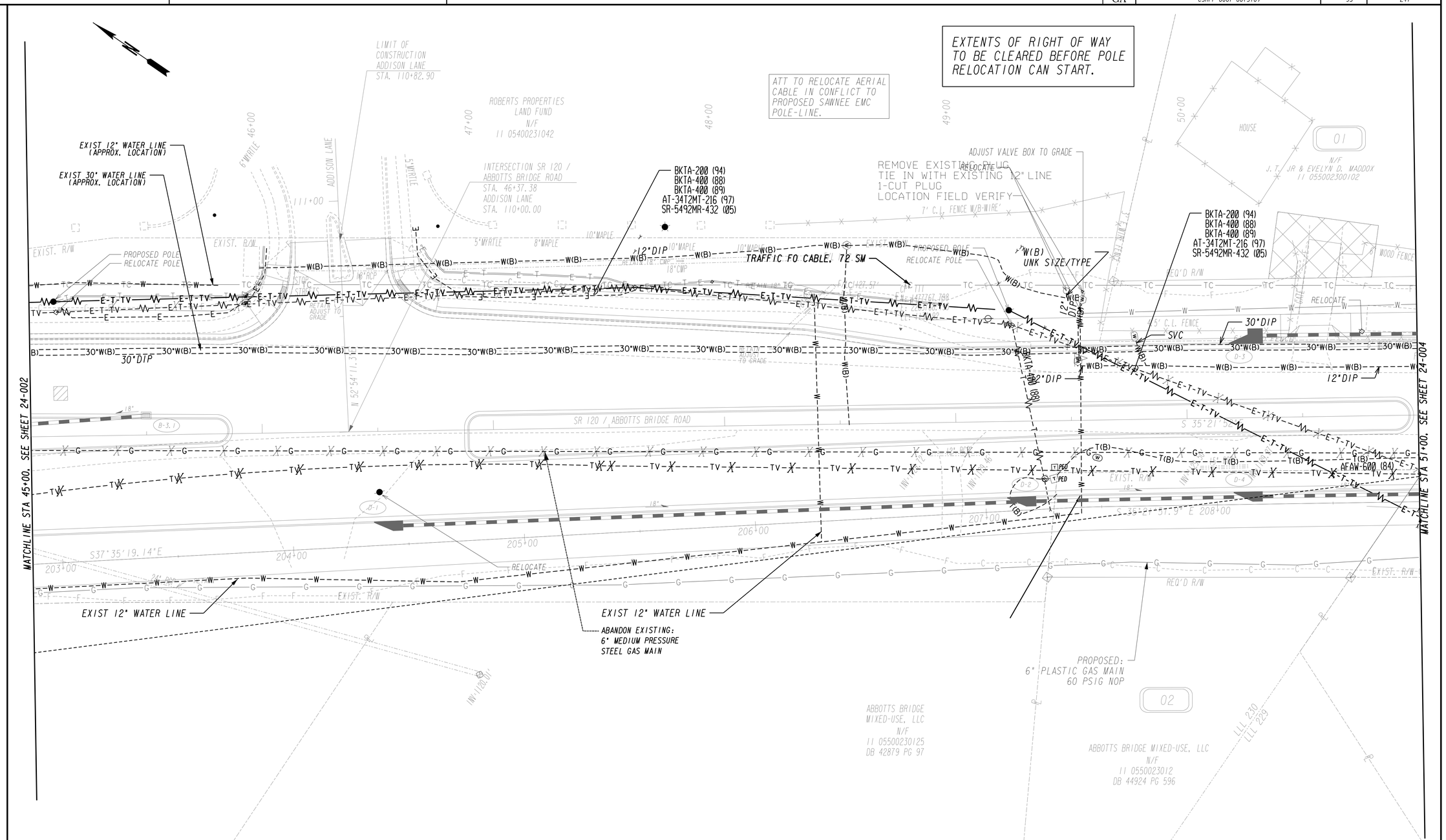
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
24-002

3/1/2007 GPLN



Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

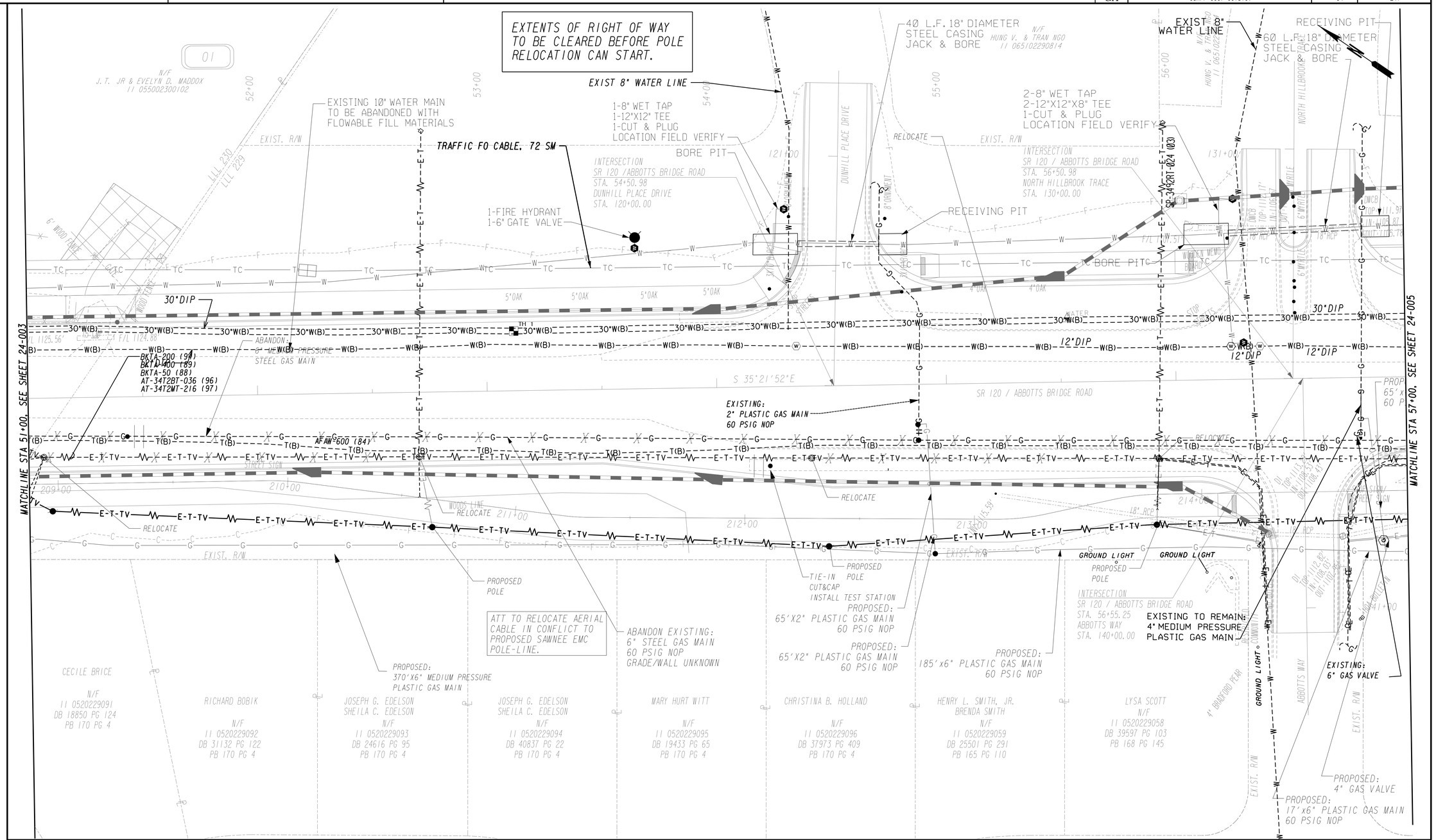
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 24-003

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	94	241



Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

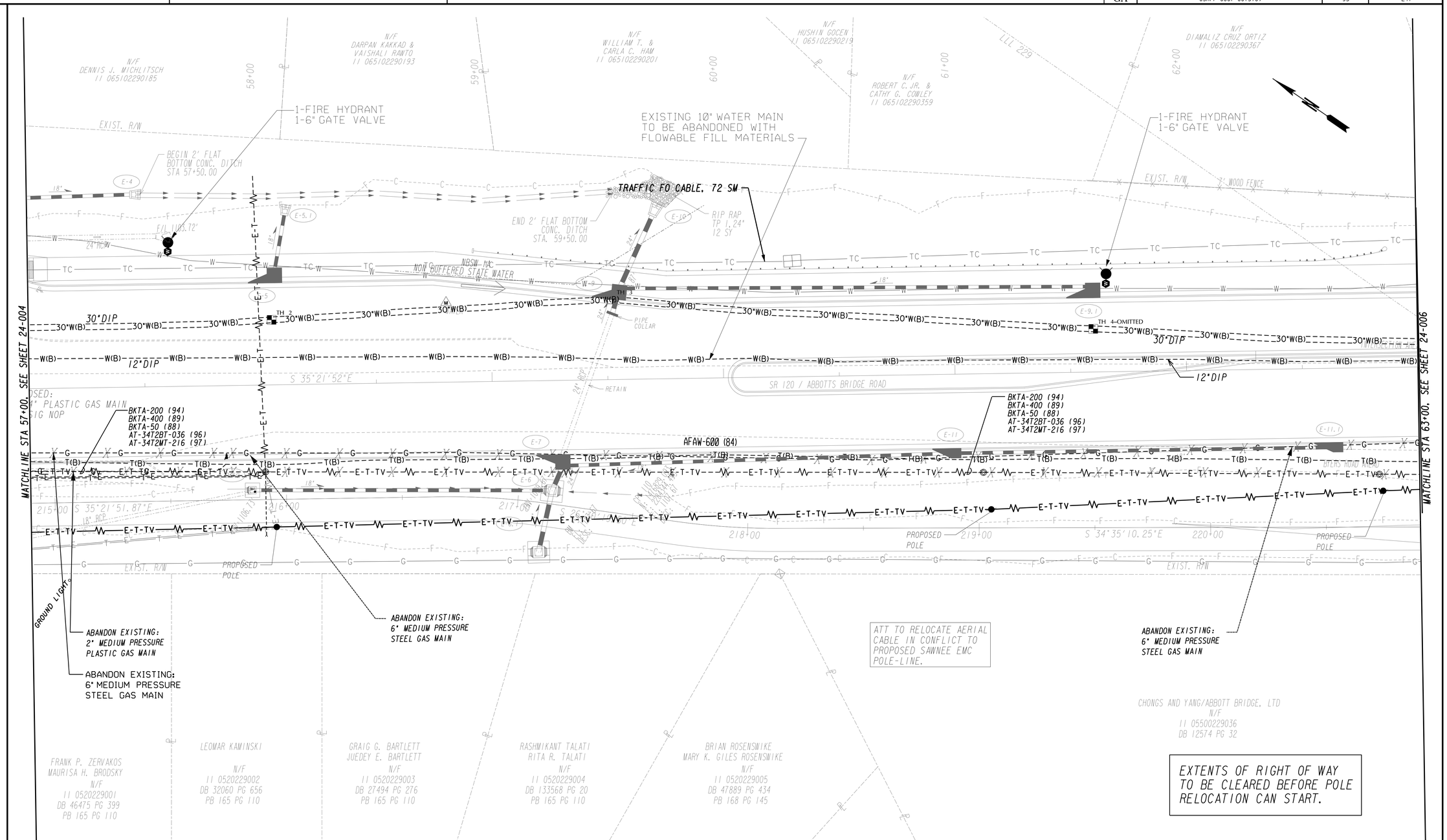
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
24-004

3/1/2007 GPLN



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SCALE IN FEET
0 20 40 80

REVISION DATES

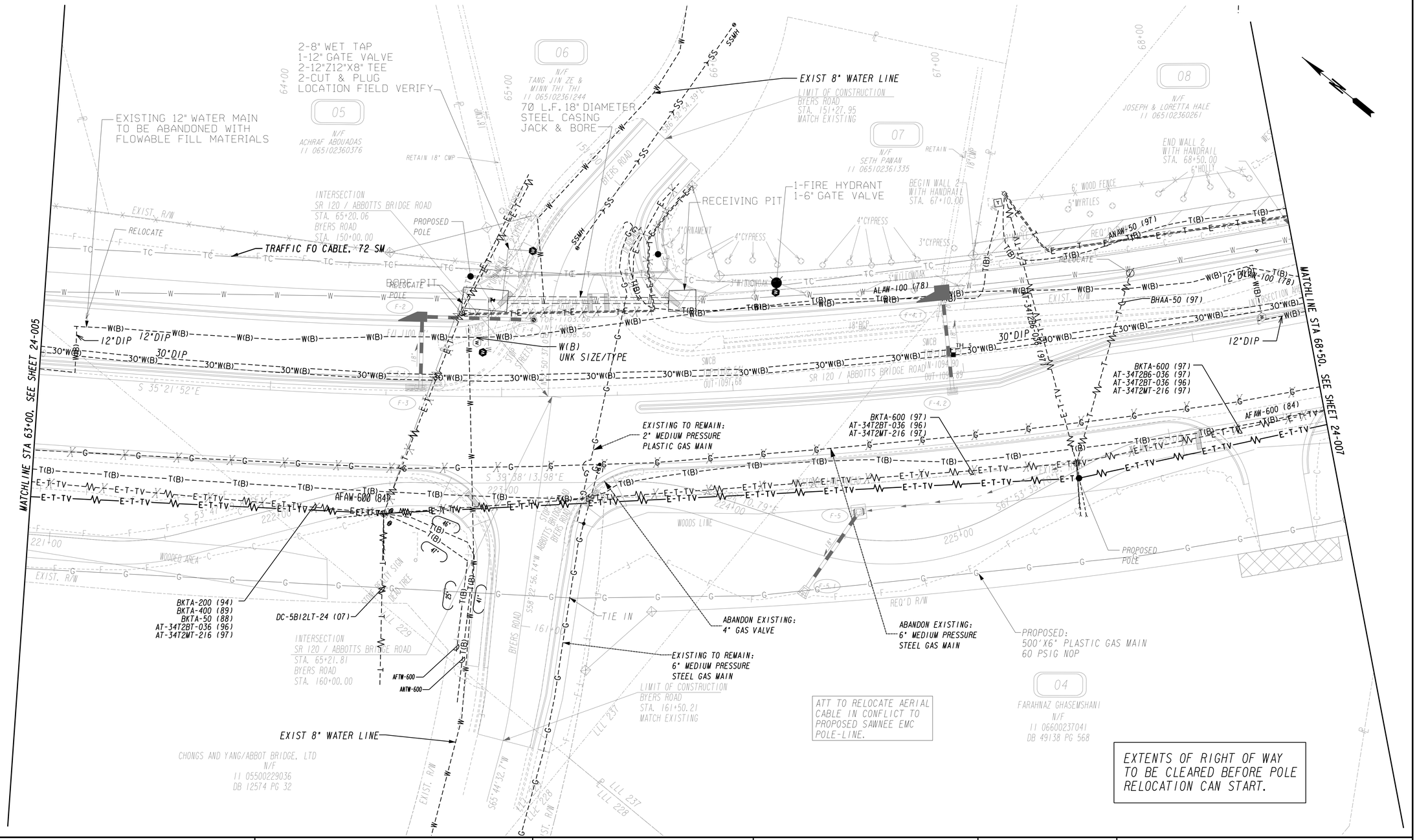
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 24-005

3/1/2007 GPLN



Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

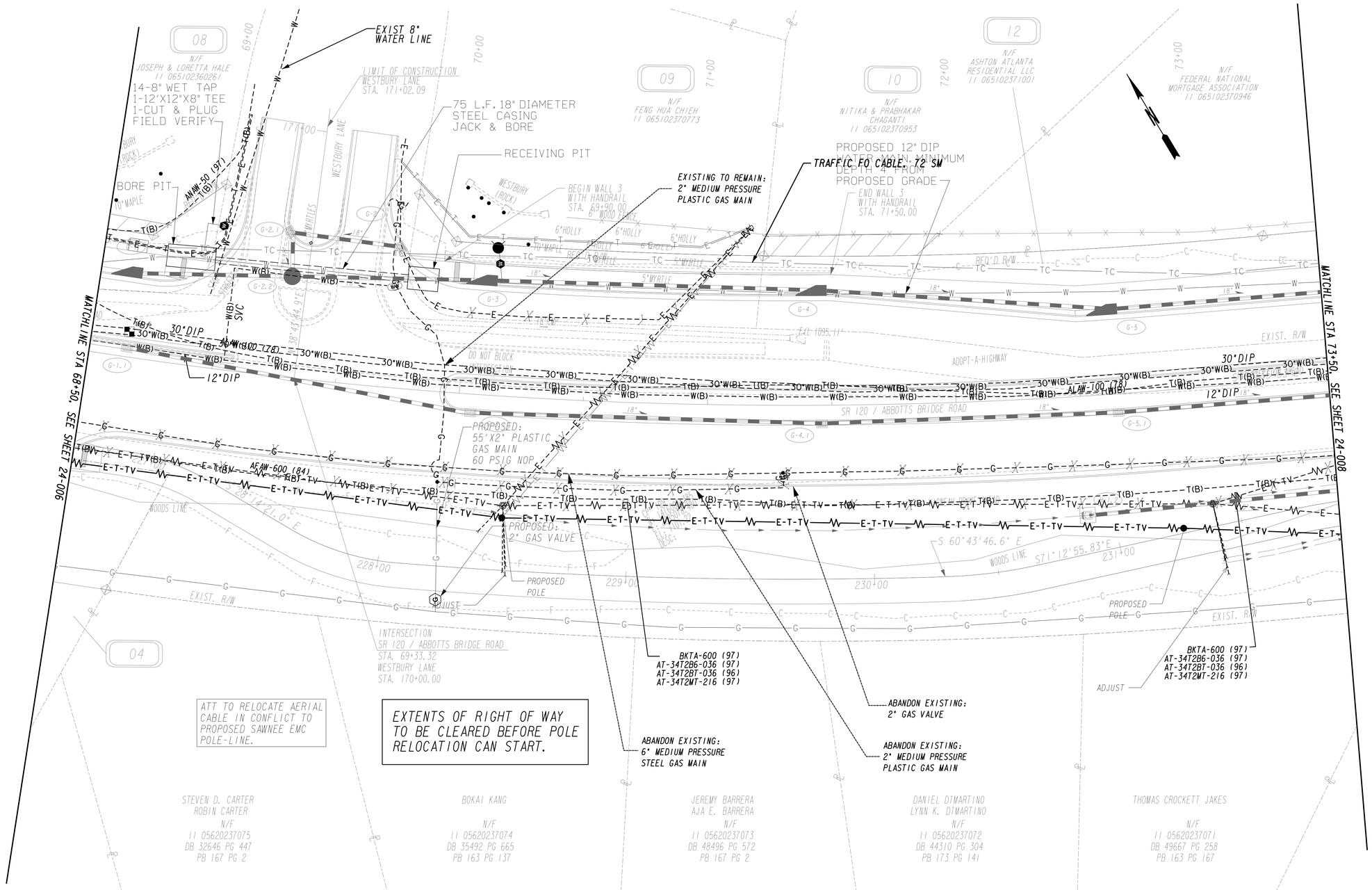
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
24-006

3/1/2007 GPLN



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SCALE IN FEET
0 20 40 80

REVISION DATES		

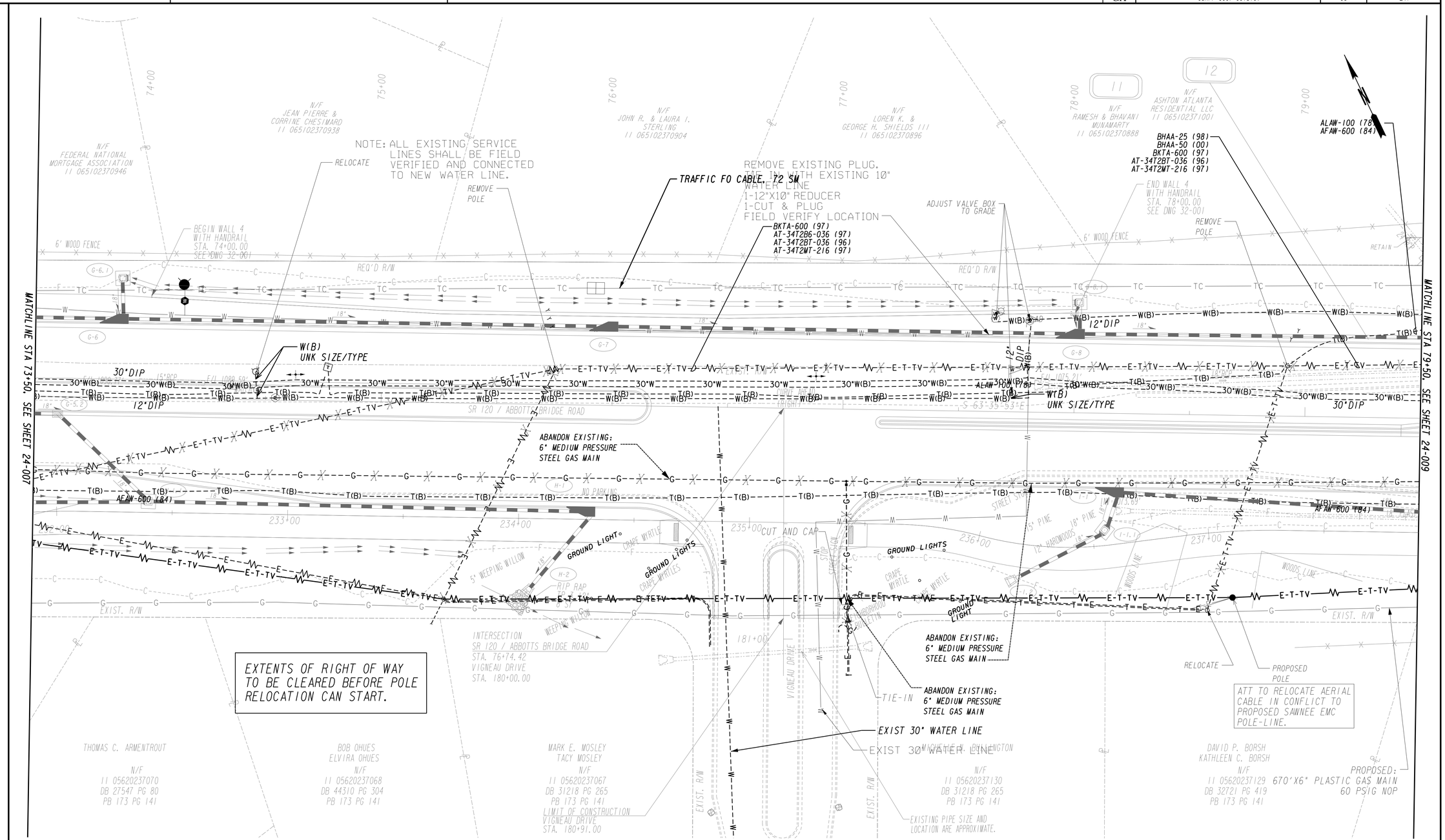
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 24-007

3/1/2007 GPLN



Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

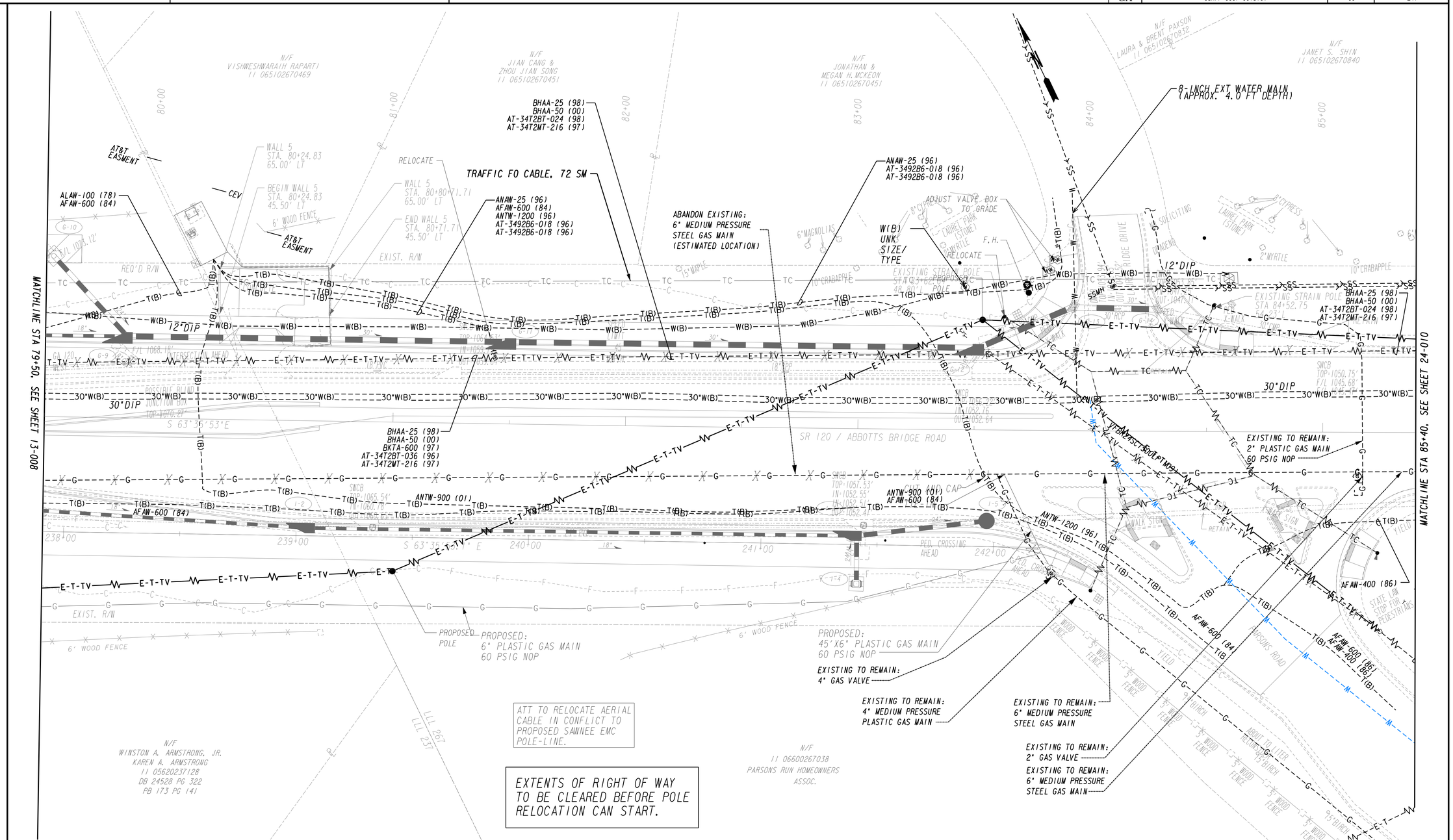
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 24-008

3/1/2007 GPLN



REVISION DATES		

SCALE IN FEET
0 20 40 80

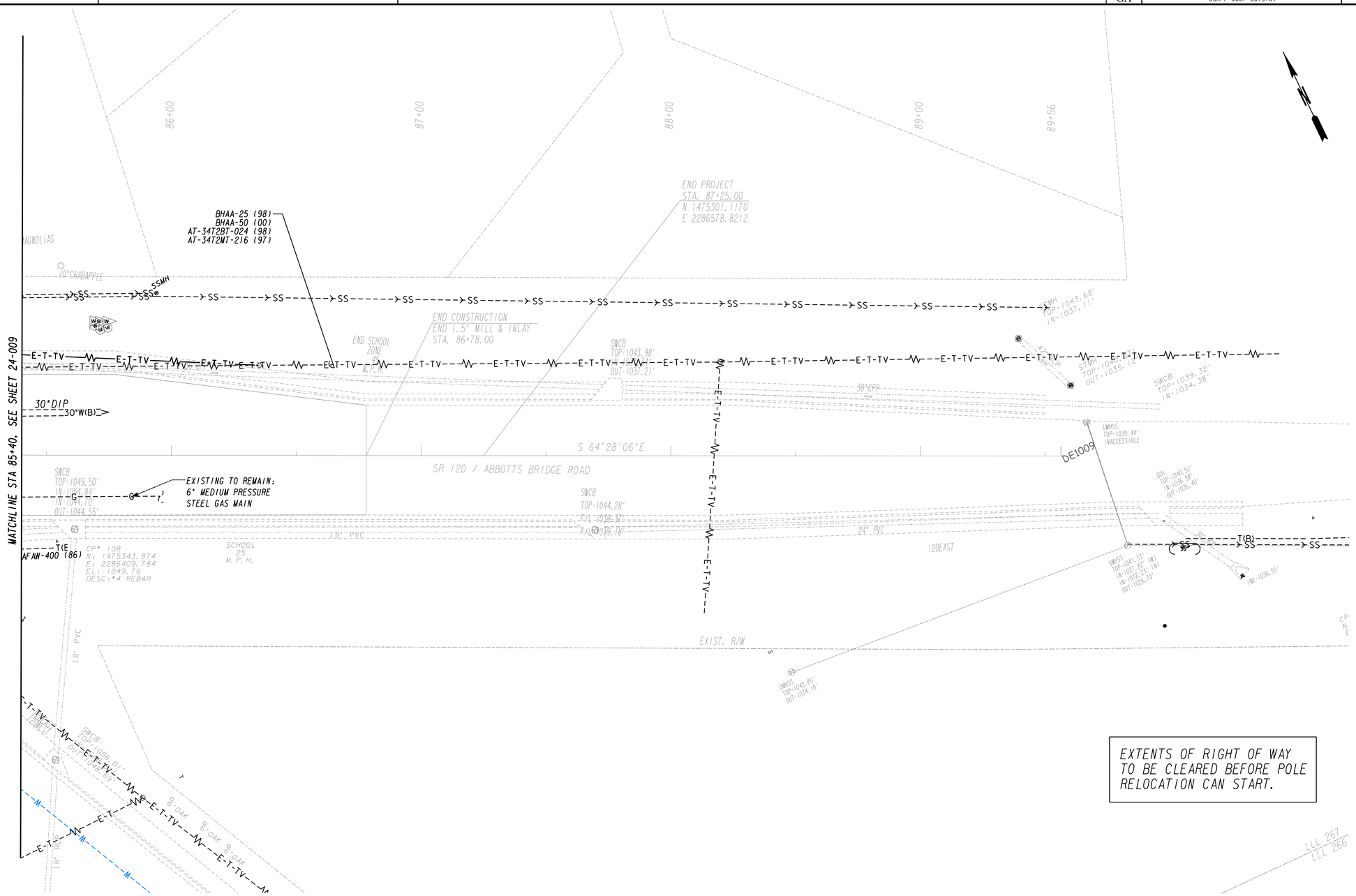
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 24-009

3/1/2007 GPLN



EXTENTS OF RIGHT OF WAY TO BE CLEARED BEFORE POLE RELOCATION CAN START.

Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

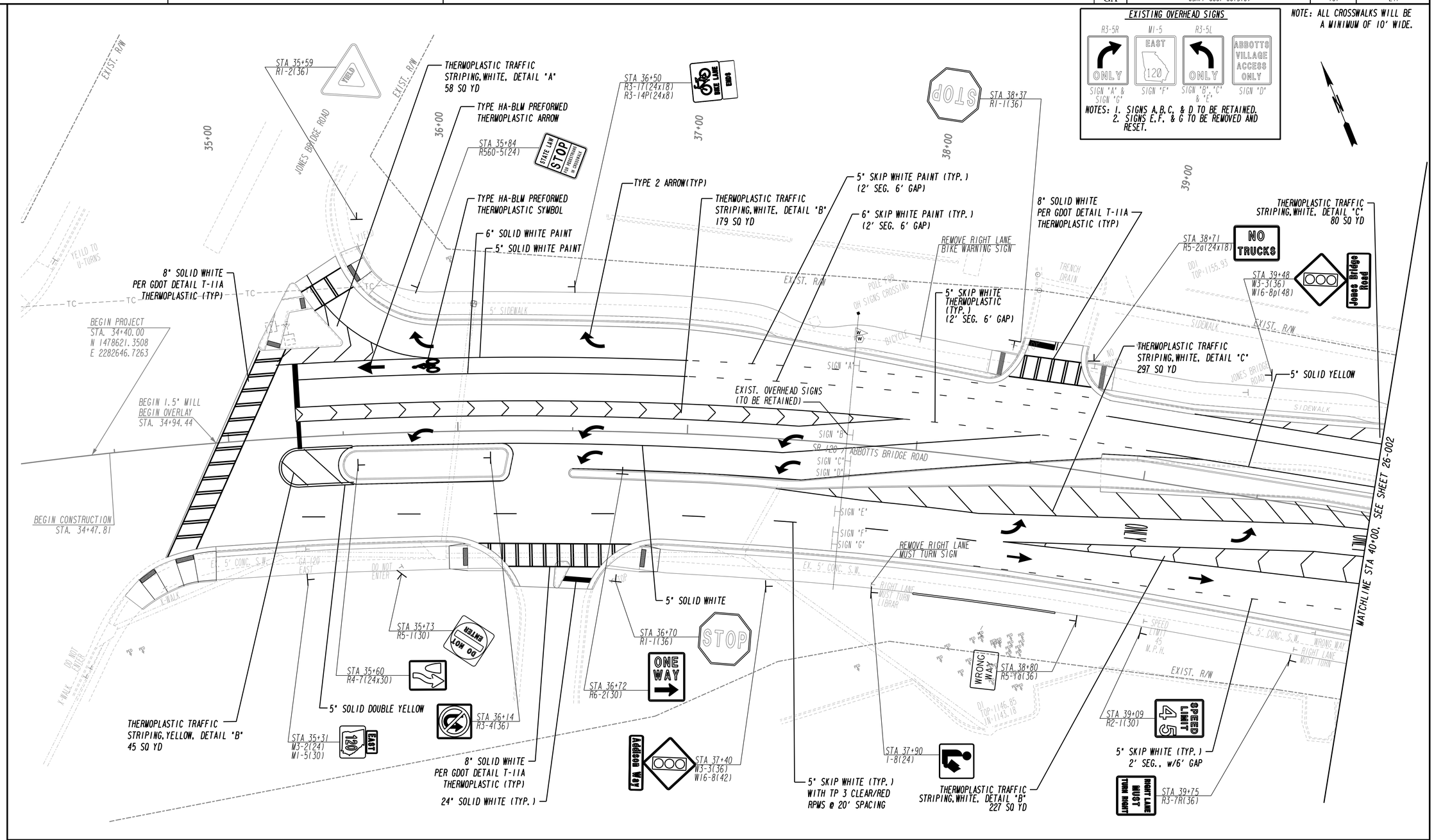
CITY OF JOHNS CREEK
PUBLIC WORKS

UTILITY PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
24-010

3/1/2007 GPLN



Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

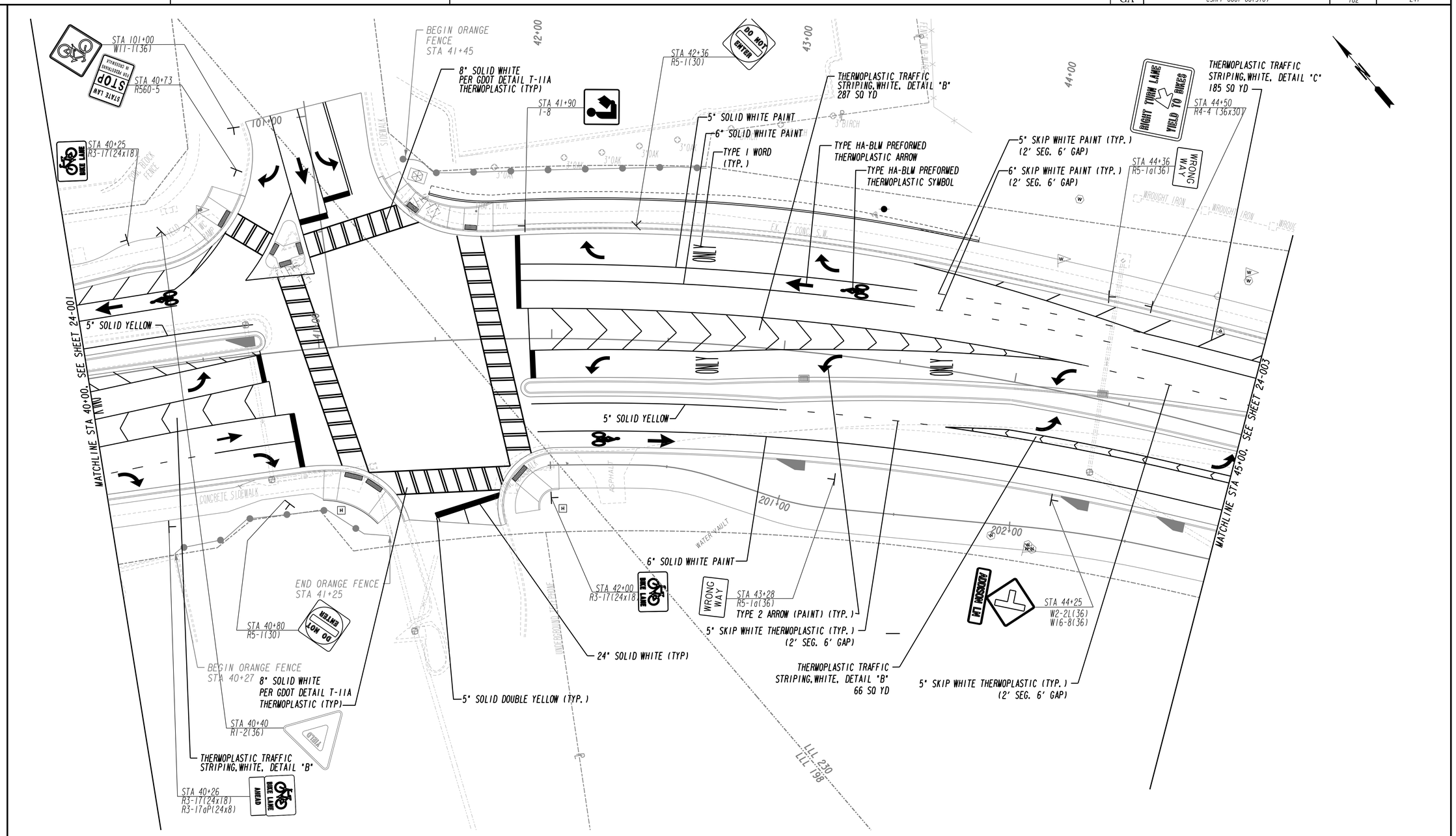
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 26-001

3/1/2007 GPLN



REVISION DATES		

SCALE IN FEET
0 20 40 80

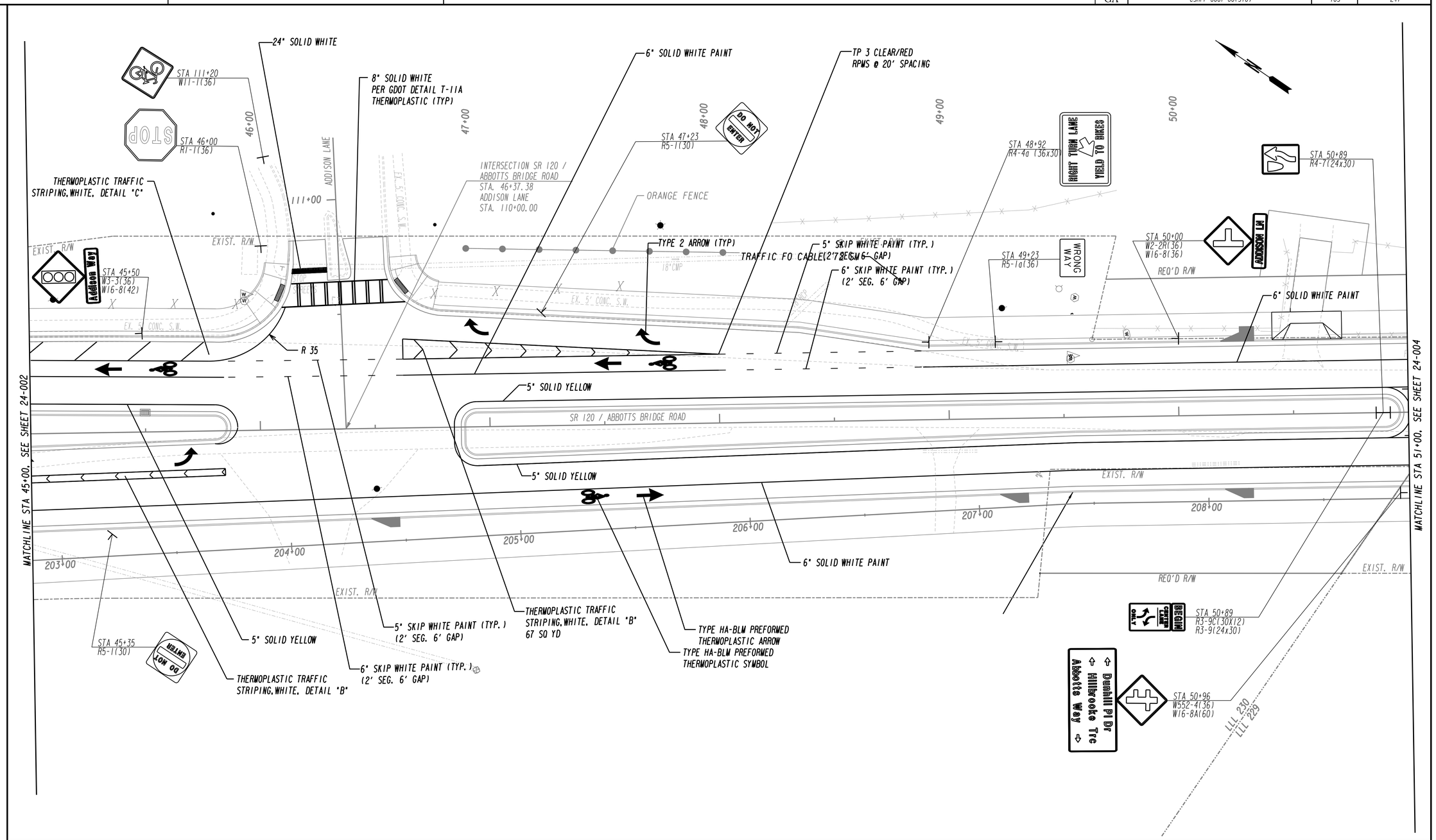
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-002

3/1/2007 GPLN



Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

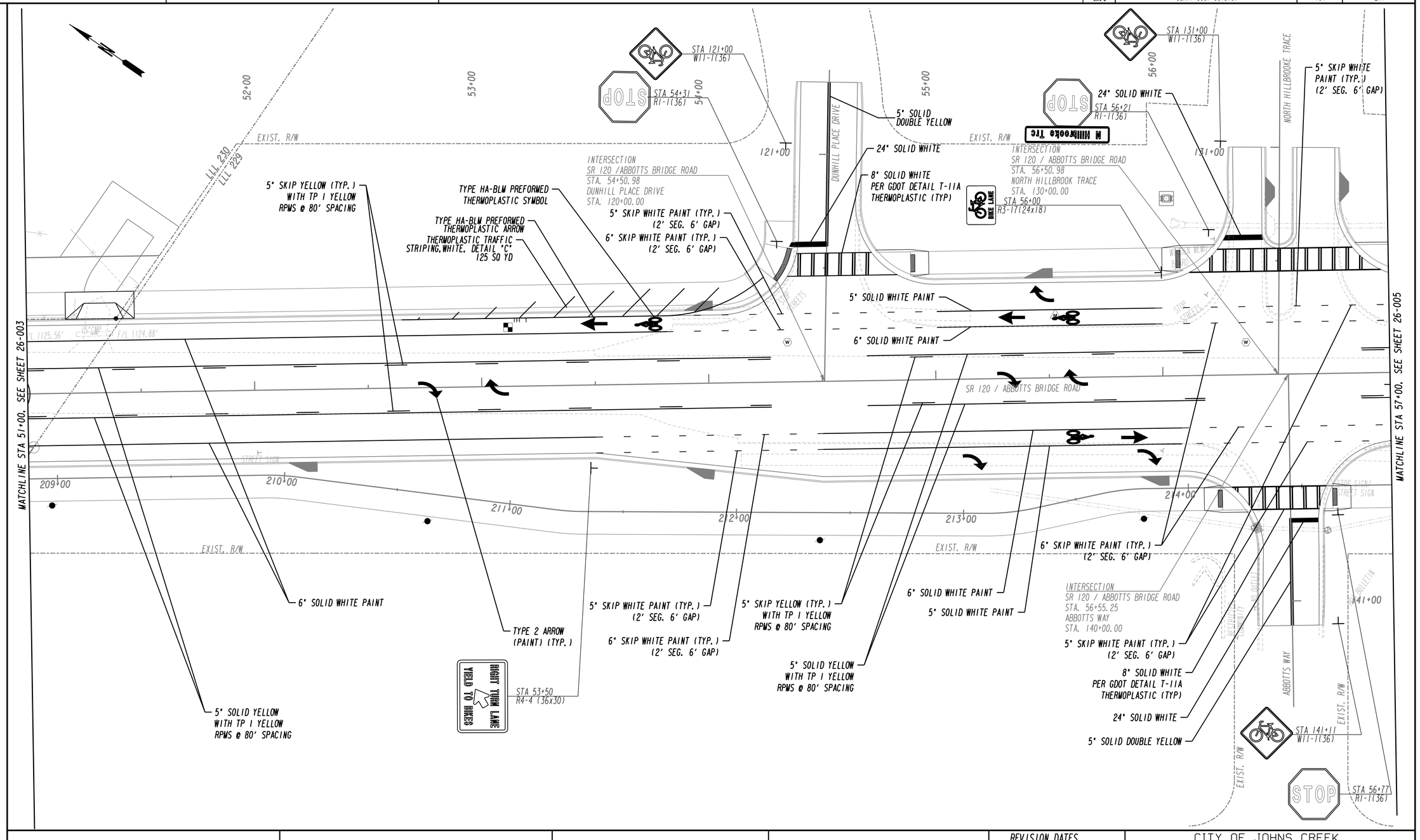
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-003

3/1/2007 GPLN



Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

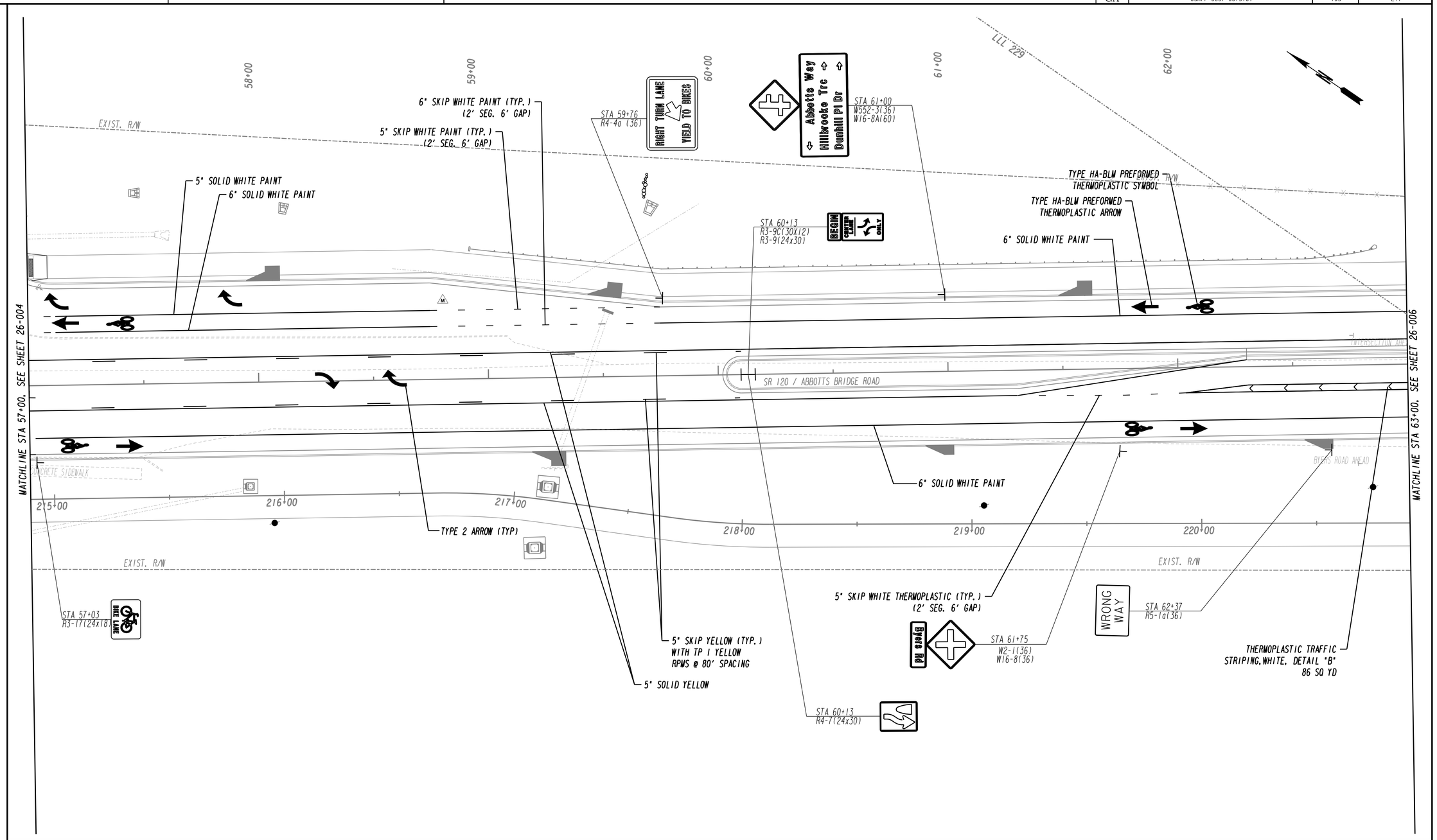
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-004

3/1/2007 GPLN



Johns Creek

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REVISION DATES		

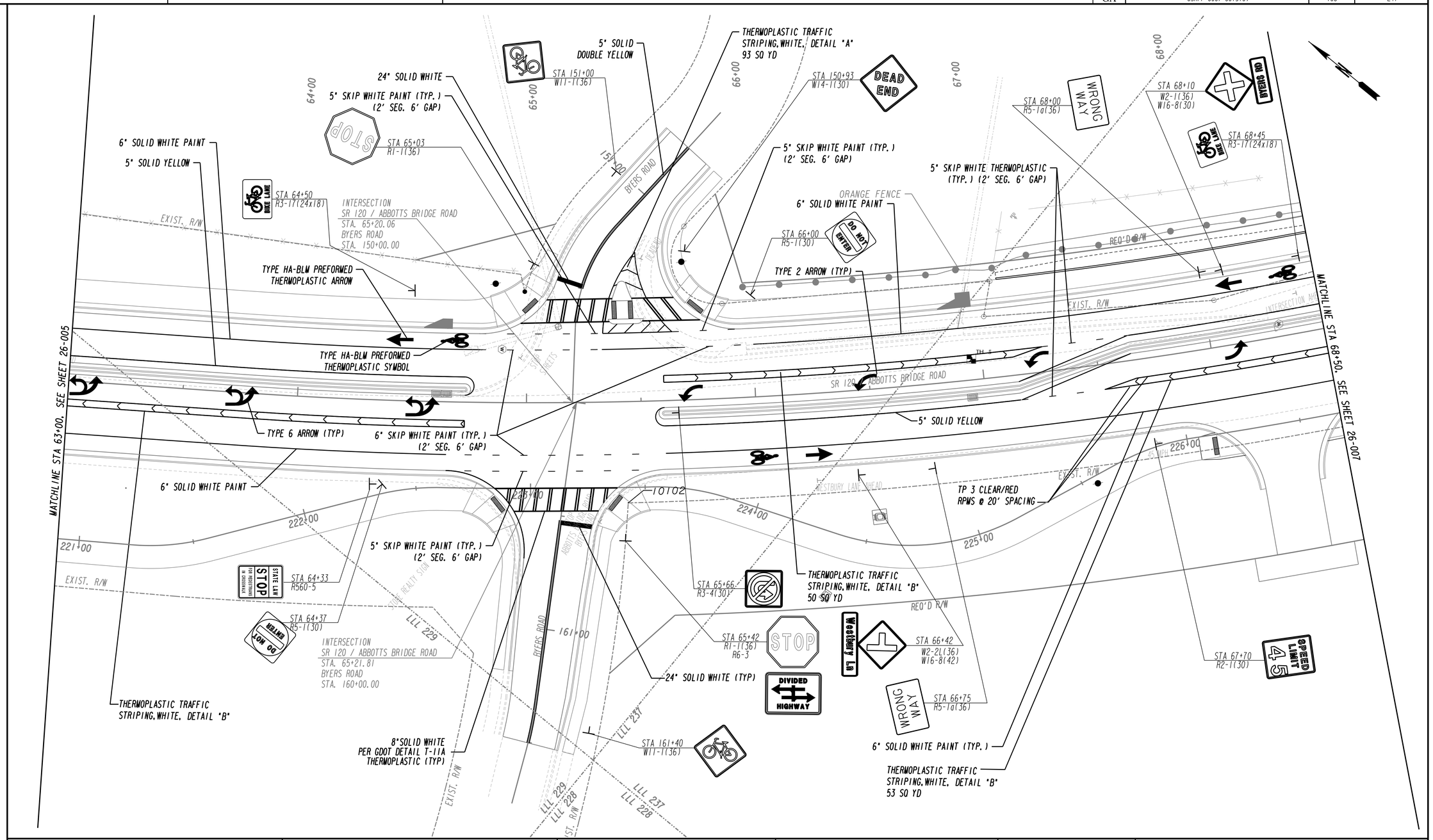
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-005

3/1/2007 GPLN



Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

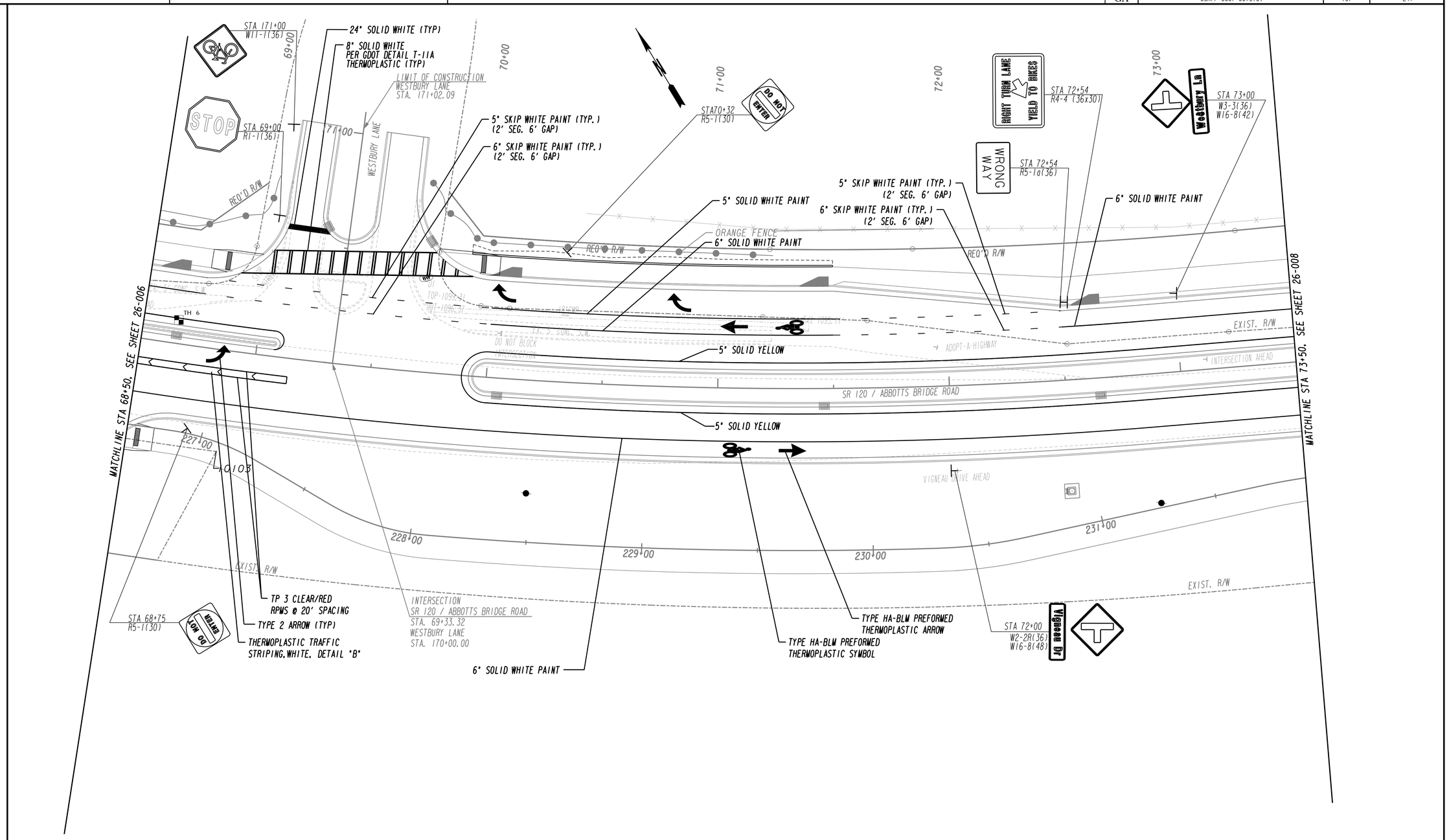
SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-006

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	107	241



Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

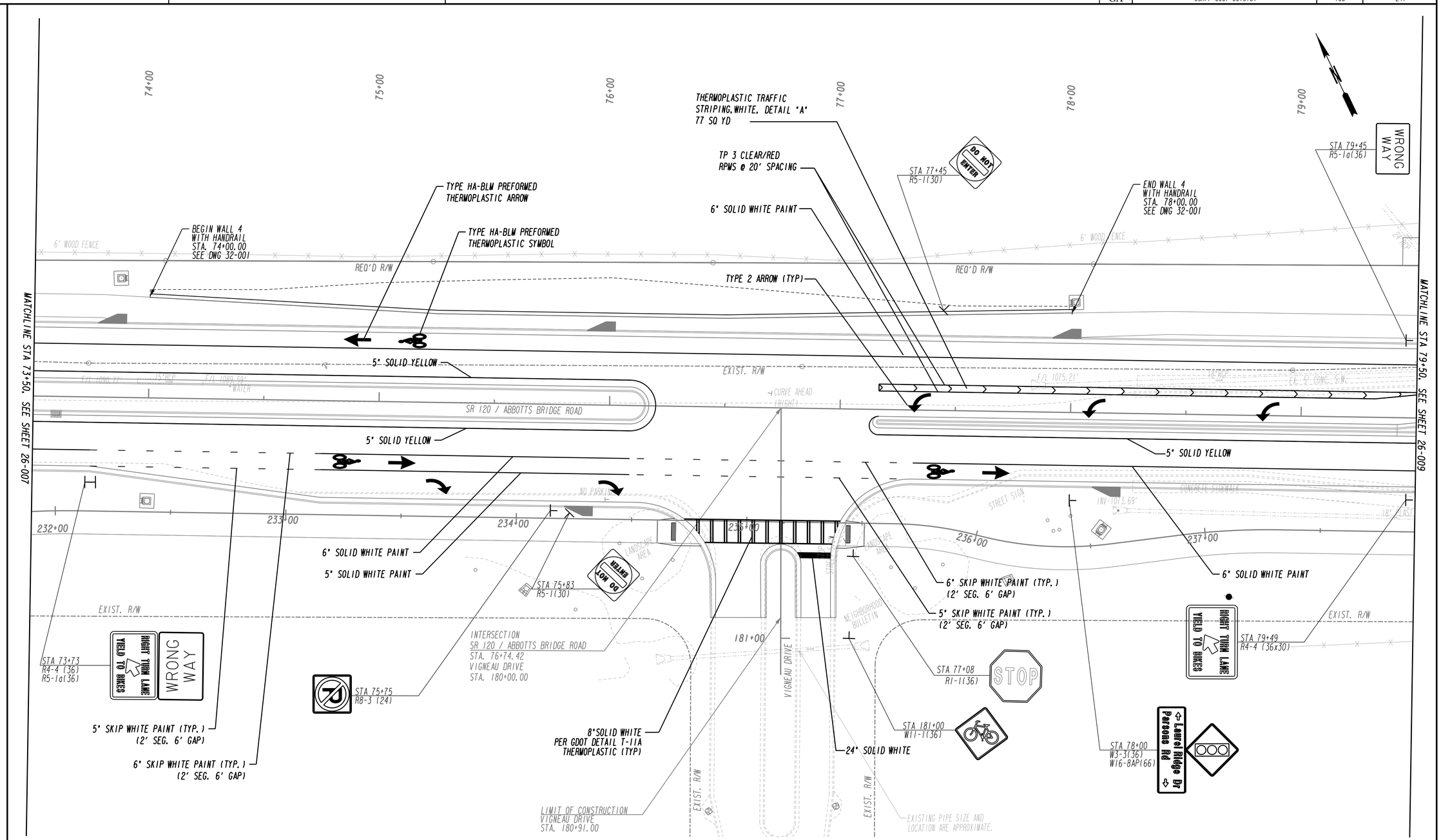
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-007

3/1/2007 GPLN



Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

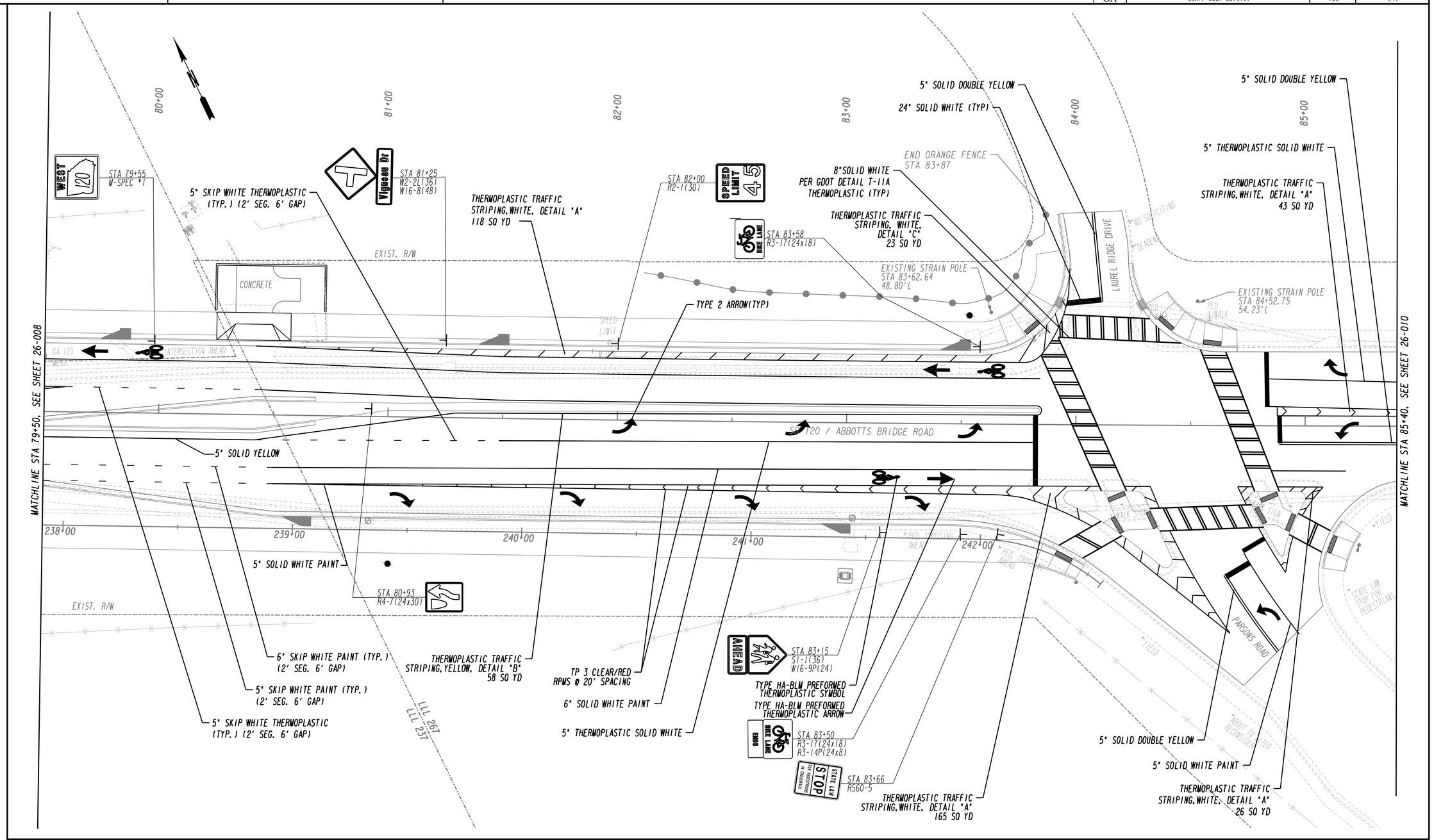
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-008

3/1/2007 GPLN



012

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

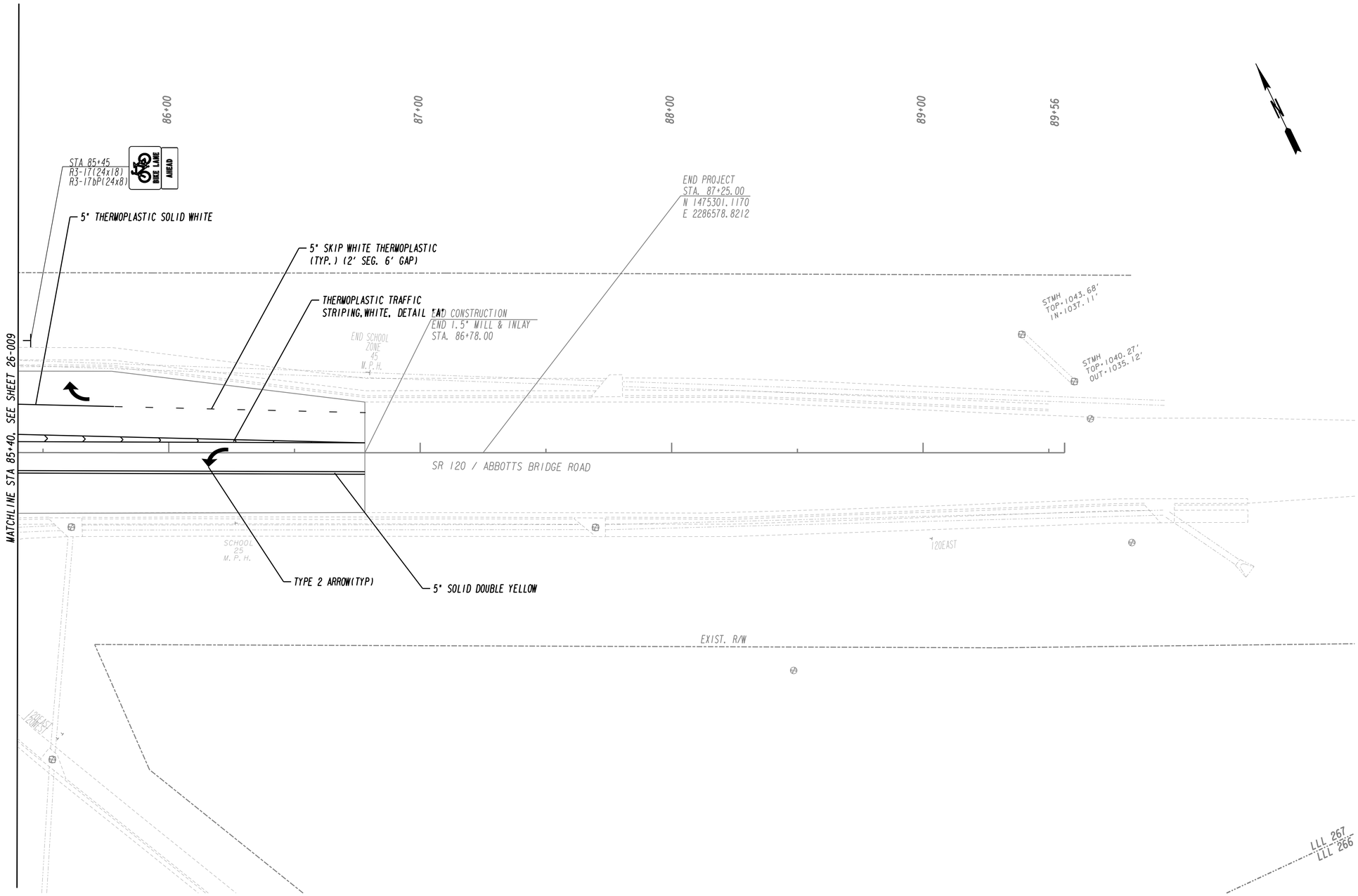
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-009

3/1/2007 GPLN



Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

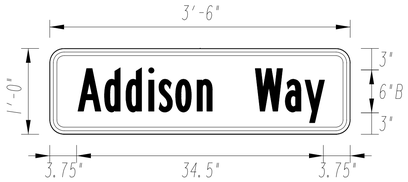
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

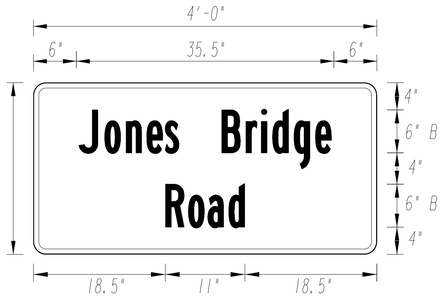
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
26-010

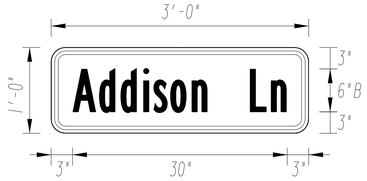
3/1/2007 GPLN



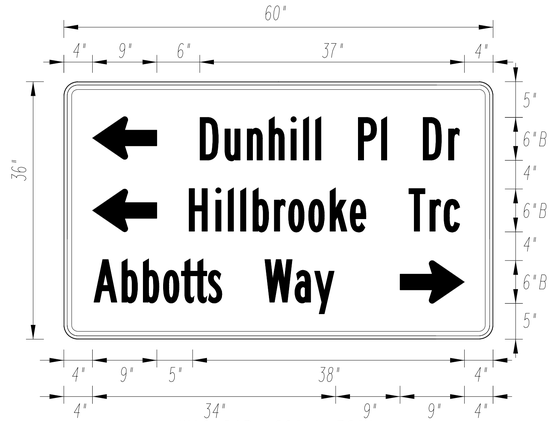
W16-8 (42" X 12")
STA 37+40 RT
STA 45+50 LT



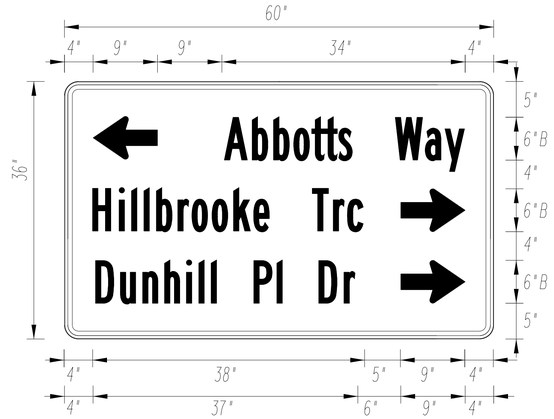
W16-8p (48" X 24")
STA 39+48 LT



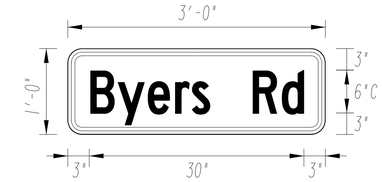
W16-8 (36" X 12")
STA 44+25 RT
STA 50+00 LT



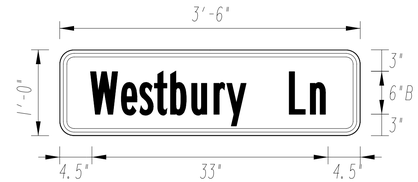
W16-8AP (60" X 36")
STA 51+00 RT



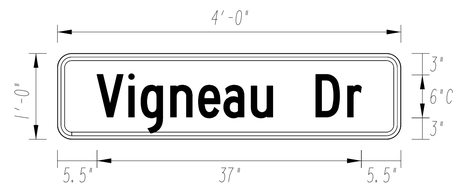
W16-8AP (60" X 36")
STA 61+00 LT



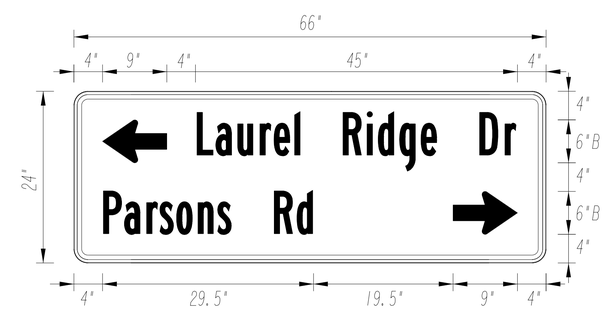
W16-8 (36" X 12")
STA 61+75 RT
STA 68+10 LT



W16-8 (42" X 12")
STA 66+42 RT
STA 73+00 LT



W16-8 (48" X 12")
STA 72+00 RT
STA 81+25 LT



W16-8A
66" X 24"
STA 78+00 RT

012

Johns Creek

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REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNING AND MARKING PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 26-011

3/1/2007 GPLN

TRAFFIC SIGNAL GENERAL NOTES

1. THE COMPLETE SIGNAL INSTALLATION SHALL CONFORM TO ALL APPROPRIATE PARTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES CURRENT EDITION.

2. SIGNAL HEADS SHALL BE ERECTED TO PROVIDE AT LEAST 17 FEET BUT NO MORE THAN 19 FEET CLEARANCE FROM BOTTOM OF SIGNAL HEADS TO TOP OF ROAD SURFACE AND A MINIMUM OF 8 FEET MEASURED HORIZONTALLY BETWEEN CENTERS OF SIGNAL FACES.

3. SHIELDED CABLE WILL BE USED FOR DETECTOR RUNS AS SHOWN ON THE DETAIL SHEET. DETECTORS SHALL HAVE SEPARATE LEAD-INS TO THE CONTROL CABINET.

4. THE CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES IN VICINITY OF NEW TRAFFIC SIGNAL POLES BEFORE ORDERING POLES. AT THE DISCRETION OF THE ENGINEER, MINOR SHIFTS, (UP TO A MAXIMUM OF 5 FEET WITHIN RIGHT-OF-WAY), IN LOCATION OF NEW SIGNAL POLES, ARE ACCEPTABLE TO AVOID UNDERGROUND UTILITIES. MINUMUM CLEARANCES FROM EDGE OF PAVEMENT SHALL BE MAINTAINED.

5. INSTALLATION IS TO BE CHECKED AND ACCEPTED BY THE CITY PRIOR TO FINAL ACCEPTANCE.

6. MATERIAL CERTIFICATION IS REQUIRED PRIOR TO BEGINNING ANY SIGNAL INSTALLATION WORK. THE CONTRACTOR SHALL FOLLOW PROCEDURES OUTLINED IN THE DOT SPECIFICATION.

7. THE CONTRACTOR SHALL REPLACE IN KIND AND SIZE, AT NO SEPARATE EXPENSE TO THE DEPARTMENT, ANY BARRIER WALL, FENCE, DITCH PAVING, CURBING, SIDEWALK, GUTTER, SLOPE PAVEMENT, SIGNS, GUARDRAILS, LANDSCAPING, GRASSINGS, UTILITY SERVICE LINES, STORM DRAIN PIPES, MASONRY WALLS AND PAVING THAT IS REMOVED, DAMAGED OR DESTROYED, DUE TO CONTRACTOR'S ACTIVITY.

8. CONTRACTOR SHALL SUBMIT LOAD CALCULATIONS, SHOP DRAWINGS AND FOUNDATION DIMENSIONS OF POLES AND CATALOG CUTS OF PROPOSED SIGNAL EQUIPMENT AND ELECTRICAL/LINE HARDWARE MATERIALS TO THE PROJECT ENGINEER FOR APPROVAL.

9. THE CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC SIGNALS DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC SIGNAL AND/OR CONTROL SYSTEM ADJUSTMENTS, INCLUDING TEMPORARY SUPPORT POLE LOCATION(S) REQUIRED BY THE PROJECT DURING THE INTERIM PERIOD THROUGH INSTALLATION OF NEW SIGNAL EQUIPMENT. AT NO TIME SHALL THE CONTRACTOR CAUSE ANY PART OF THE SIGNAL OPERATION TO BE INOPERABLE.

10. ALL ERADICATION OF EXISTING STRIPING WILL BE PAID FOR UNDER SECTION 150.

11. WHEN APPLICABLE TO THE PLANS, THE CONTRACTOR MUST INSTALL AND TEST ALL NEW SIGNAL ITEMS PRIOR TO REMOVING EXISTING SIGNALS FROM SERVICE.

12. WHEN APPLICABLE TO THE PLANS, CONTRACTOR WILL BE REQUIRED TO PROVIDE A NEW RISER, CONDUIT, CONDUCTORS AND DISCONNECT TO PROVIDE POWER SERVICE INTO THE CONTROLLER CABINET.

13. SHIELDED CABLE SHALL BE USED FOR DETECTOR RUNS, AS SHOWN ON THE DETAIL SHEET. DETECTORS SHALL HAVE SEPARATE LEAD-INS TO THE CONTROLLER CABINET. LOOP AND PEDESTRIAN DETECTOR CABLE SHALL BE 14 AWG IMSA 50-2 CABLE OR 14 GAUGE MULTI-PAIR.

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Utilities Protection Center, Inc
Know what's below.
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REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNAL NOTES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
27-001

EXISTING UTILITIES

- EXISTING GUY WIRE
- EX.OH ELECTRIC
- EX POWER POLE
- EX TRANSFORMER
- EX.UG ELECTRIC
- EX GAS LINE
- EX GAS METER
- EX GAS VALVE
- EX WATER LINE
- EX FIRE HYDRANT
- EX WATER METER
- EX WATER VALVE
- EX SANITARY SEWER
- EX SS MANHOLE
- EX TELEPHONE MH
- EX OH TELEPHONE
- EX TELEPHONE POLE
- EX UG TELEPHONE
- EX OH CABLE TV
- EX UG CABLE TV

EXISTING SIGNAL

- CONTROLLER CABINET
- STRAIN POLE
- TIMBER POLE
- DOWN GUY
- MAST ARM
- STREET LIGHT
- 3 SECTION HEAD
- 5 SECTION HEAD
- OVERHEAD SIGN
- PEDESTAL POLE
- PED SIGNAL HEAD
- CURB CUT RAMP
- PULLBOX
- 6x6 PULSE LOOP
- 6x18 CALL LOOP
- 6x40 PRESENCE LOOP (DIPOLE)
- 6x40 PRESENCE LOOP (QUADRUPOLE)
- CONDUIT
- RAILROAD CONTROLLER
- SIGN POST

PROPOSED SIGNAL

- CONTROLLER CABINET
- CONTROLLER CABINET W/ BATTERY BACKUP
- STRAIN POLE
- TIMBER POLE
- DOWN GUY
- MAST ARM
- STREET LIGHT
- 3 SECTION HEAD
- 3 SECTION HEAD W/ BACKPLATE
- 4 SECTION HEAD W/ BACKPLATE
- 5 SECTION HEAD
- 5 SECTION HEAD W/ BACKPLATE
- OVERHEAD SIGN
- PEDESTAL POLE
- PED SIGNAL HEAD
- CURB CUT RAMP - (See ADA Detail)
- PULLBOX, TYPE 2
- PULLBOX, TYPE 3
- PULLBOX, TYPE 6
- PULLBOX, TYPE 7
- 6x6 PULSE LOOP
- 6x6 VIDEO DETECTION ZONE
- 6x40 VIDEO DETECTION ZONE
- 6x40 PRESENCE LOOP (QUADRUPOLE)
- CONDUIT, NONMETAL
- SIGN POST
- IVDS CAMERA
- RIGHT OF WAY MARKER
- CCTV CAMERA

PROPERTY AND EXISTING R/W LINE	BEGIN LIMIT OF ACCESS.....BLA
REQUIRED R/W LINE	END LIMIT OF ACCESS.....ELA
CONSTRUCTION LIMITS	LIMIT OF ACCESS
EASEMENT FOR CONSTRUCTION & MAINTANENCE OF SLOPES	REQ'D R/W AND LIMIT OF ACCESS
EASEMENT FOR CONSTR OF SLOPES	
EASEMENT FOR CONSTR OF DRIVES	

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REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNAL LEGEND

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
27-002

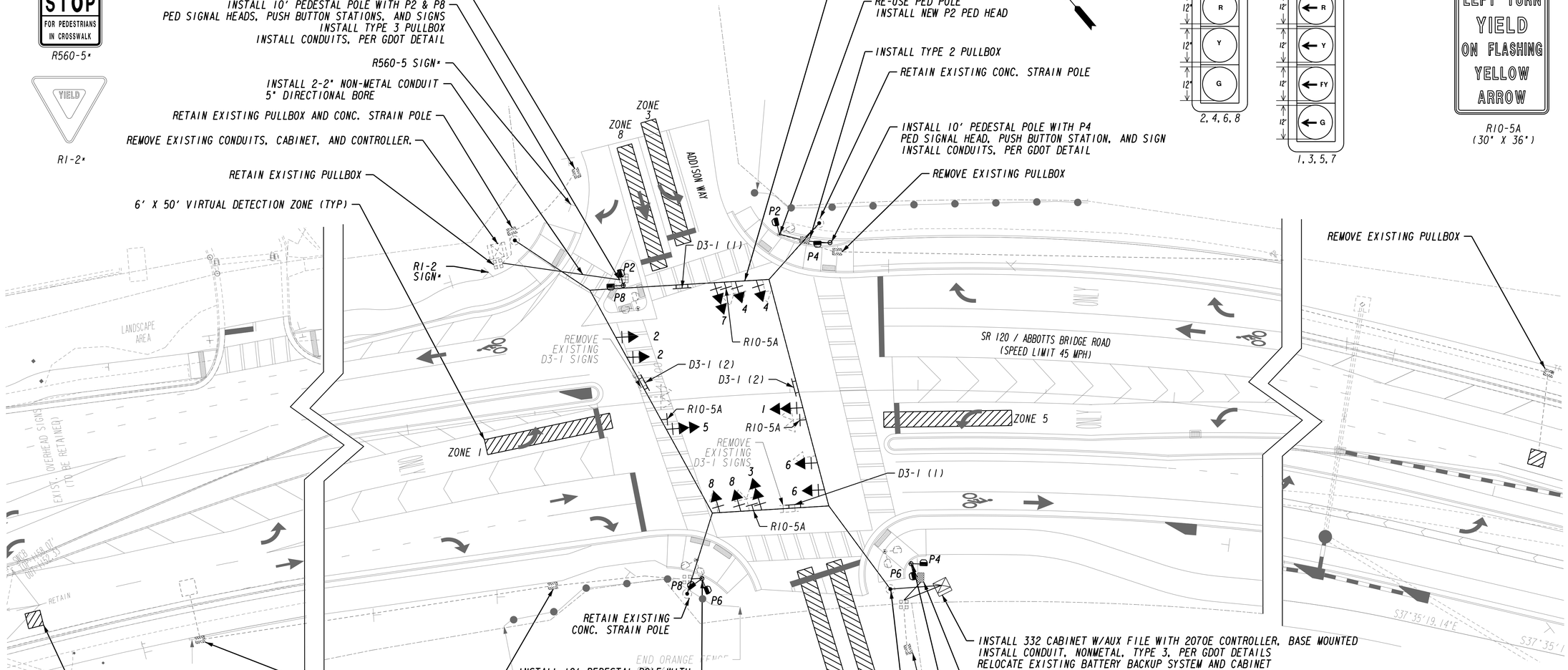
3/1/2007 GPLN

* FOR REFERENCE ONLY.
SEE SHT. 26-002 FOR DETAILS

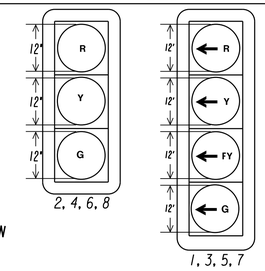
R560-5*

R1-2*

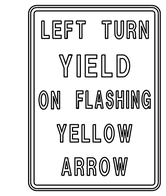
NOTES:
1. ALL EXISTING PULLBOX AND CONDUIT LOCATIONS ARE APPROX.



LED "INCANDESCENT LOOK" SIGNAL HEADS WITH REFLECTORIZED BACKPLATES

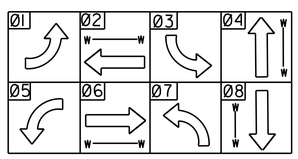


OVERHEAD SIGNS



R10-5A
(30" X 36")

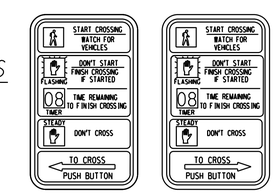
PHASING DIAGRAM



DSPEC SIGNS

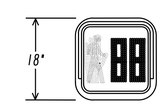
D3-1(1) D3-1(2)

PEDESTRIAN SIGNS



R10-3E(L) 9" X 15" R10-3E(R) 9" X 15"

PEDESTRIAN SIGNAL HEADS



P2, P4, P6, P8

Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNAL PLANS
*1 - SR 120/ABBOTTS BRIDGE ROAD AT ADDISON WAY

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
27-003

3/1/2007 GPLN

GDOT DEFAULT 332 CABINET PIN OUTS

SLOT	1	2	3	4	5	6	7	8	9	10	11	12	13	14

UPPER INPUT FILE

CHANNEL 1	TYPE												DC	DC	DC
	C1 PIN	56	39	63	47	58	41	65	49	60		80	67	68	81
	FUNCTION	L1	L2			L3	L4						P2	P6	FLASH
	FIELD TERM	TB2 1,2	TB2 5,6	TB2 9,10	TB4 1,2	TB4 5,6	TB4 9,10	TB6 1,2	TB6 5,6	TB6 9,10			TB8 4,6	TB8 7,9	N/C
ACTRA/SEPAC	DETECTOR	1	3	5	7	9	11	13	15	17			PED 2	PED 6	N/C
ACTRA/SEPAC	ASSIGNED	1	2	2	2	3	4	4	4	1			ø2	ø6	N/C

CHANNEL 2	TYPE												DC	DC	DC
	C1 PIN	56	43	76	47	58	45	78	49	62		53	69	70	82
	FUNCTION												P4	P8	STOP TIME
	FIELD TERM	TB2 3,4	TB2 7,8	TB2 11,12	TB4 3,4	TB4 7,8	TB4 11,12	TB6 3,4	TB6 7,8	TB6 11,12			TB8 5,6	TB8 8,9	N/C
ACTRA/SEPAC	DETECTOR	1	4	6	7	9	12	14	15	18			PED 4	PED 8	
ACTRA/SEPAC	ASSIGNED	1	2	2	2	3	4	4	4	3			ø4	ø8	

LOWER INPUT FILE

CHANNEL 1	TYPE														
	C1 PIN	55	40	64	48	57	42	66	50	59		54	71	72	51
	FUNCTION	L5	L6			L7	L8								
	FIELD TERM	TB3 1,2	TB3 5,6	TB3 9,10	TB5 1,2	TB5 5,6	TB5 9,10	TB7 1,2	TB7 5,6	TB7 9,10			TB9 4,6	TB9 7,9	TB9 10,12
ACTRA/SEPAC	DETECTOR	19	21	23	25	29	31	33	35	37			PRE 3	PRE 4	PRE 1
ACTRA/SEPAC	ASSIGNED	5	6	6	6	7	8	8	8	5					

CHANNEL 2	TYPE												DC	DC	DC
	C1 PIN	55	44	77	48	57	46	79	50	61		75	73	74	52
	FUNCTION														
	FIELD TERM	TB3 3,4	TB3 7,8	TB3 11,12	TB5 3,4	TB5 7,8	TB5 11,12	TB7 3,4	TB7 7,8	TB7 11,12			TB9 5,6	TB9 8,9	TB9 11,12
ACTRA/SEPAC	DETECTOR	19	22	24	25	29	32	34	35	38			PRE 5	PRE 6	PRE 2
ACTRA/SEPAC	ASSIGNED	5	6	6	6	7	8	8	8	7					

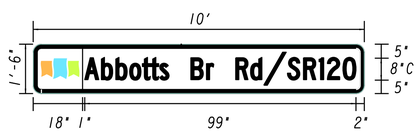
SR 120/ABBOTTS BRIDGE ROAD AT ADDISON WAY

QUANTITIES ARE FOR INFORMATION ONLY.
THE CONTRACTOR SHOULD FIELD VERIFY PRIOR TO ORDERING MATERIALS.

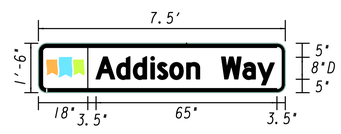
LIST OF MATERIALS	UNITS	QUANTITY
CONTROLLER CABINET ASSEMBLIES		
A. CONTROLLER UNIT, MODEL 2070E	EA	1
B. CABINET ASSEMBLY, MODEL 332A WITH AUX FILE	EA	1
E. SWITCH PACK	EA	16
F. DC ISOLATOR	EA	3
J. 2010 CONFLICT MONITOR, EXTENDED FEATURES	EA	1
332A PREFABRICATED CONTROLLER CABINET BASE	EA	1
LOOP/PED LEAD-IN WIRE (SHIELDED, TWISTED/1000 FT); 3 PAIR, 18 AWG	REEL	1
SIGNAL CABLE (14 AWG); 7 CONDUCTOR, PER 1000 FT.	REEL	3
3-SECTION, 12" SIGNAL HEAD w/(5mm) LED - "INCANDESCENT LOOK" - , PLASTIC	EA	8
4-SECTION, 12" SIGNAL HEAD w/ (5mm) LED - "INCANDESCENT LOOK" - SIGNAL HEAD, PLASTIC	EA	4
1-SECTION, 18" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, FULL HAND/MAN OVERLAP		
9" HIGH, Numbers & 12" Symbols	EA	8
9" x 15", Double Push Button Station Adapter for 4" Dia Pedestrian Pole, Adjustable	EA	4
PEDESTRIAN PUSHBUTTONS STATIONS, w/BUTTONS and SIGNS:		
9" x 15", R10-3e, (L)eft or (R)ight, Countdown	EA	8
BACK PLATE FOR ONE-WAY, 3-SECTION, 12" SIGNAL HEAD, ABS PLASTIC, BLACK w/RETROREFLECTIVE STRIP	EA	8
BACK PLATE FOR ONE-WAY, 4-SECTION, 12" SIGNAL HEAD, ABS PLASTIC, BLACK w/RETROREFLECTIVE STRIP	EA	4
HARDWARE FOR SPANWIRE MOUNTING	EA	12
HARDWARE FOR PEDESTAL POLE, TOP POST MOUNTING, ONE-WAY BRACKET ASSEMBLY	EA	2
HARDWARE FOR PEDESTAL POLE, TOP POST MOUNTING, TWO-WAY BRACKET ASSEMBLY	EA	3
PEDESTAL POLE & SQUARE BASE	EA	4
PULL BOX, PB-2	EA	4
PULL BOX, PB-3	EA	1
R10-5a, LEFT TURN YIELD ON FLASHING YELLOW ARROW SIGN	EA	4
MESSENGER CABLE, 3/8"	LF	460
SPANWIRE BULLRING	EA	4
MISCELLANEOUS MATERIALS NEEDED TO COMPLETE INSTALLATION	LUMP	LUMP

PAY ITEM	LIST OF MATERIALS	UNITS	QUANTITY
647-1000	TRAFFIC SIGNAL INSTALLATION	LS	LS
682-6233	NON-METAL TYPE 3 CONDUIT, 2 IN	LF	80
682-9950	5" DIRECTIONAL BORE	LF	50

DETAILS OF OVERHEAD STREET NAME SIGNS



D3-1(1)
2 EA



D3-1(2)
2 EA

SUMMARY OF QUANTITIES FOR OVERHEAD STREET NAME SIGNS

LOCATION	SIGN	SIZE	QUANTITY	SQUARE FEET
INTERSECTION #1				
SR 120/ABBOTTS BRIDGE ROAD	D3-1(1)	120"X 18"	2	30
@ADDISON WAY	D3-1(2)	90" X 18"	2	22.5

Johns Creek

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REVISION DATES		

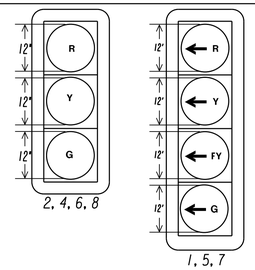
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNAL INSTALLATION DETAILS
#1 - SR 120/ABBOTTS BRIDGE ROAD AT ADDISON WAY

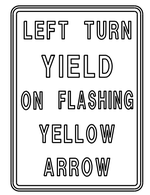
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
27-004

LED "INCANDESCENT LOOK" SIGNAL HEADS WITH REFLECTORIZED BACKPLATES

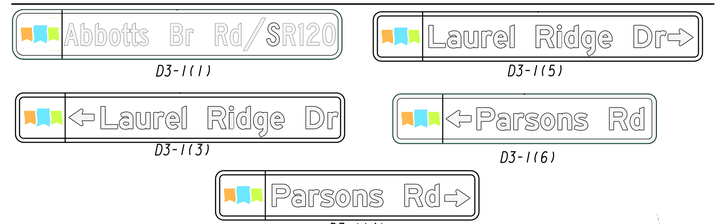


OVERHEAD SIGNS



R10-5A
(30" X 36")

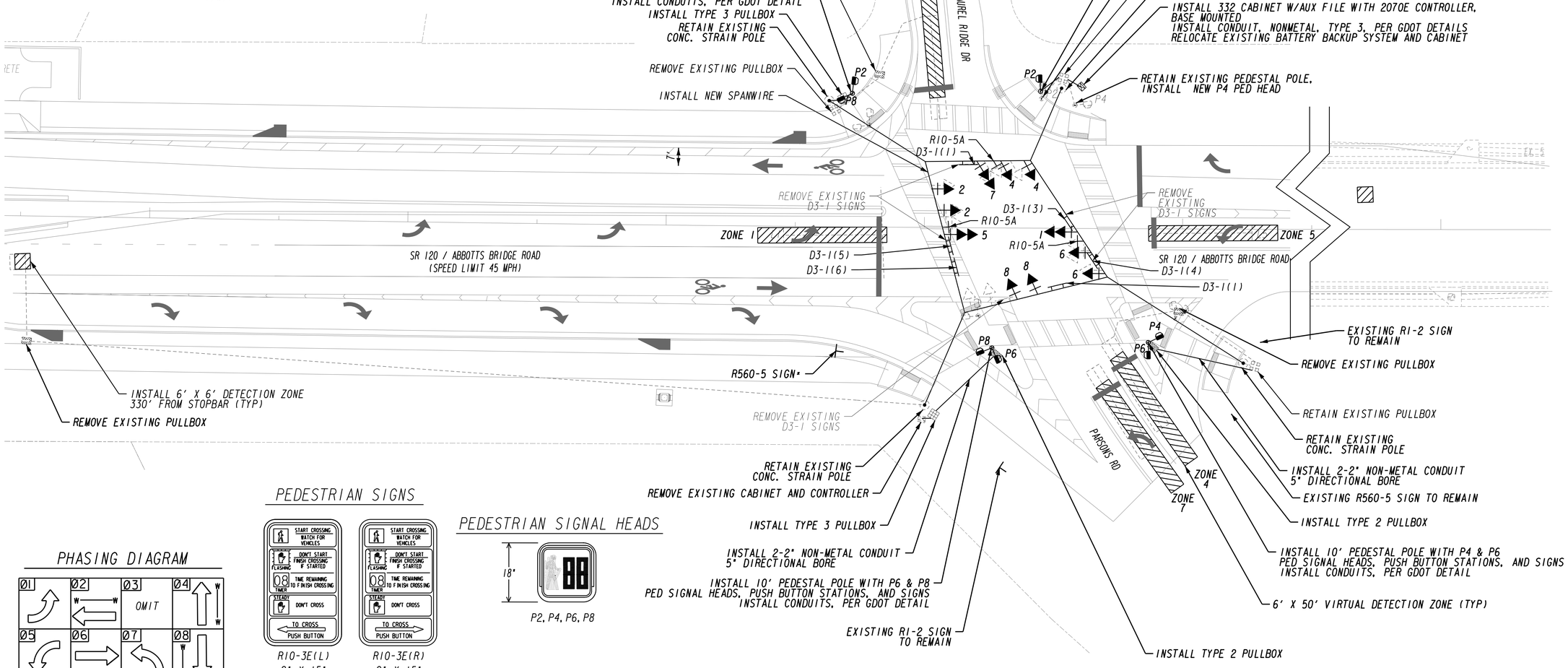
DSPEC SIGNS



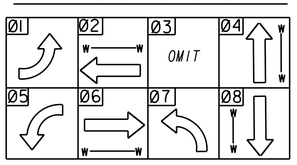
* FOR REFERENCE ONLY, SEE SHT. 26-009 FOR DETAILS

R560-5*

NOTES:
1. ALL EXISTING PULLBOX AND CONDUIT LOCATIONS ARE APPROX.



PHASING DIAGRAM



PEDESTRIAN SIGNS

R10-3E(L)
9" X 15"

R10-3E(R)
9" X 15"

PEDESTRIAN SIGNAL HEADS

P2, P4, P6, P8

Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNAL PLANS
*2 - SR 120/ABBOTTS BRIDGE ROAD AT PARSONS RD

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 27-005

3/1/2007 GPLN

GDOT DEFAULT 332 CABINET PIN OUTS

	SLOT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
UPPER INPUT FILE															
CHANNEL 1	TYPE												DC	DC	DC
	C1 PIN	56	39	63	47	58	41	65	49	60		80	67	68	81
	FUNCTION	L1	L2			L3	L4						P2	P6	FLASH
	FIELD TERM	TB2 1,2	TB2 5,6	TB2 9,10	TB4 1,2	TB4 5,6	TB4 9,10	TB6 1,2	TB6 5,6	TB6 9,10			TB8 4,6	TB8 7,9	N/C
ACTRA/SEPAC	DETECTOR	1	3	5	7	9	11	13	15	17			PED 2	PED 6	N/C
ACTRA/SEPAC	ASSIGNED	1	2	2	2	3	4	4	4	1			ø2	ø6	N/C
CHANNEL 2	TYPE												DC	DC	DC
	C1 PIN	56	43	76	47	58	45	78	49	62		53	69	70	82
	FUNCTION												P4	P8	STOP TIME
	FIELD TERM	TB2 3,4	TB2 7,8	TB2 11,12	TB4 3,4	TB4 7,8	TB4 11,12	TB6 3,4	TB6 7,8	TB6 11,12			TB8 5,6	TB8 8,9	N/C
ACTRA/SEPAC	DETECTOR	1	4	6	7	9	12	14	15	18			PED 4	PED 8	
ACTRA/SEPAC	ASSIGNED	1	2	2	2	3	4	4	4	3			ø4	ø8	
LOWER INPUT FILE															
CHANNEL 1	TYPE														
	C1 PIN	55	40	64	48	57	42	66	50	59		54	71	72	51
	FUNCTION	L5	L6			L7	L8								
	FIELD TERM	TB3 1,2	TB3 5,6	TB3 9,10	TB5 1,2	TB5 5,6	TB5 9,10	TB7 1,2	TB7 5,6	TB7 9,10			TB9 4,6	TB9 7,9	TB9 10,12
ACTRA/SEPAC	DETECTOR	19	21	23	25	29	31	33	35	37			PRE 3	PRE 4	PRE 1
ACTRA/SEPAC	ASSIGNED	5	6	6	6	7	8	8	8	5					
CHANNEL 2	TYPE												DC	DC	DC
	C1 PIN	55	44	77	48	57	46	79	50	61		75	73	74	52
	FUNCTION														
	FIELD TERM	TB3 3,4	TB3 7,8	TB3 11,12	TB5 3,4	TB5 7,8	TB5 11,12	TB7 3,4	TB7 7,8	TB7 11,12			TB9 5,6	TB9 8,9	TB9 11,12
ACTRA/SEPAC	DETECTOR	19	22	24	25	29	32	34	35	38			PRE 5	PRE 6	PRE 2
ACTRA/SEPAC	ASSIGNED	5	6	6	6	7	8	8	8	7					

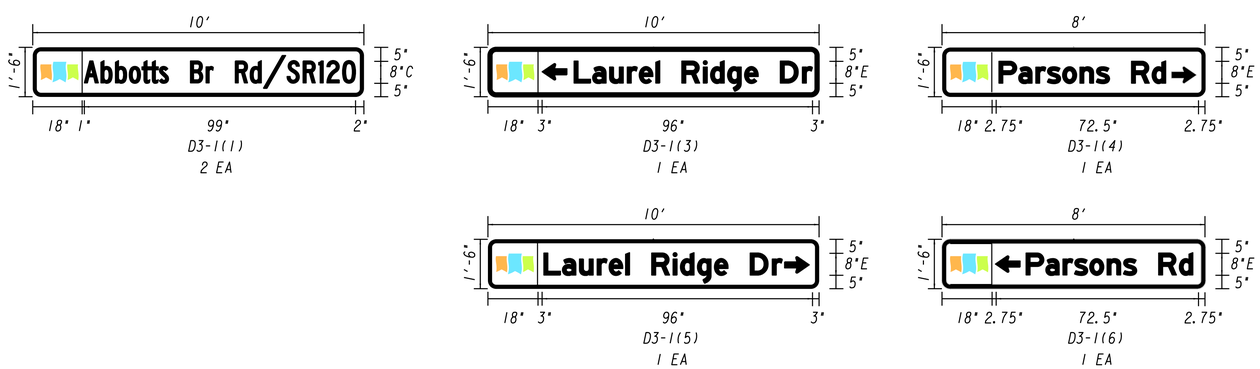
SR 120/ABBOTTS BRIDGE ROAD AT PARSONS RD/LAUREL RIDGE DR

QUANTITIES ARE FOR INFORMATION ONLY.
THE CONTRACTOR SHOULD FIELD VERIFY PRIOR TO ORDERING MATERIALS.

LIST OF MATERIALS	UNITS	QUANTITY
CONTROLLER CABINET ASSEMBLIES		
A. CONTROLLER UNIT, MODEL 2070E	EA	1
B. CABINET ASSEMBLY, MODEL 332A WITH AUX FILE	EA	1
E. SWITCH PACK	EA	14
J. 2010 CONFLICT MONITOR, EXTENDED FEATURES	EA	1
F. DC ISOLATOR	EA	3
332A PREFABRICATED CONTROLLER CABINET BASE	EA	1
LOOP/PED LEAD-IN WIRE (SHIELDED, TWISTED/1000 FT); 3 PAIR, 18 AWG	REEL	1
SIGNAL CABLE (14 AWG); 7 CONDUCTOR, PER 1000 FT.	REEL	3
3-SECTION, 12" SIGNAL HEAD w/(5mm) LED - "INCANDESCENT LOOK" - , PLASTIC	EA	8
4-SECTION, 12" SIGNAL HEAD w/ (5mm) LED - "INCANDESCENT LOOK" - SIGNAL HEAD, PLASTIC	EA	3
1-SECTION, 18" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, FULL HAND/MAN OVERLAP		
9" HIGH, Numbers & 12" Symbols	EA	8
9" x 15", Double Push Button Station Adapter for 4" Dia Pedestrian Pole, Adjustable	EA	3
PEDESTRIAN PUSHBUTTONS STATIONS, w/BUTTONS and SIGNS:		
9" x 15", R10-3e, (L)eft or (R)ight, Countdown	EA	8
BACK PLATE FOR ONE-WAY, 3-SECTION, 12" SIGNAL HEAD, ABS PLASTIC, BLACK w/RETROREFLECTIVE STRIP	EA	8
BACK PLATE FOR ONE-WAY, 4-SECTION, 12" SIGNAL HEAD, ABS PLASTIC, BLACK w/RETROREFLECTIVE STRIP	EA	3
HARDWARE FOR SPANWIRE ERECTION	EA	11
HARDWARE FOR PEDESTAL POLE, TOP POST MOUNTING, ONE-WAY BRACKET ASSEMBLY	EA	2
HARDWARE FOR PEDESTAL POLE, TOP POST MOUNTING, TWO-WAY BRACKET ASSEMBLY	EA	3
PEDESTAL POLE & SQUARE BASE, 10FT	EA	4
PULL BOX, PB-2	EA	2
PULL BOX, PB-3	EA	1
R10-5a, LEFT TURN YIELD ON FLASHING YELLOW ARROW SIGN	EA	3
MESSENGER CABLE, 3/8"	LF	400
SPANWIRE BULL-RING	EA	4
MISCELLANEOUS MATERIALS NEEDED TO COMPLETE INSTALLATION	LUMP	LUMP

PAY ITEM	LIST OF MATERIALS	UNITS	QUANTITY
647-1000	TRAFFIC SIGNAL INSTALLATION	LS	LS
682-6233	NON-METAL TYPE 3 CONDUIT, 2 IN	LF	140
682-9950	5" DIRECTIONAL BORE	LF	70

DETAILS OF OVERHEAD STREET NAME SIGNS



SUMMARY OF QUANTITIES FOR OVERHEAD STREET NAME SIGNS

LOCATION	SIGN	SIZE	QUANTITY	SQUARE FEET
INTERSECTION #2				
SR 120/ABBOTTS BRIDGE ROAD	D3-1(1)	120"X 18"	2	30
@PARSONS RD/LAUREL RIDGE DR	D3-1(3)	120"X 18"	1	15
	D3-1(4)	96"X 18"	1	12
	D3-1(5)	120"X 18"	1	15
	D3-1(6)	96"X 18"	1	12

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REVISION DATES		

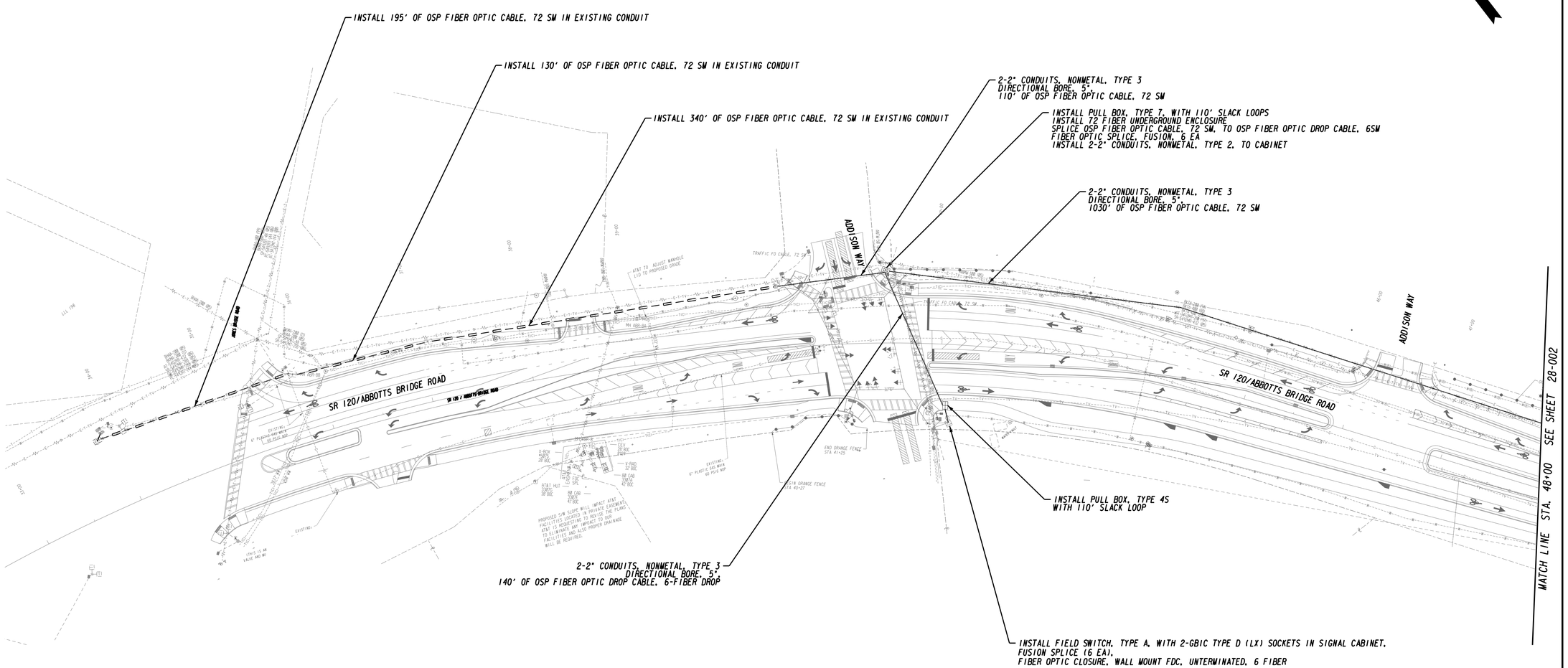
CITY OF JOHNS CREEK
PUBLIC WORKS

SIGNAL INSTALLATION DETAILS
#2 - SR 120/ABBOTTS BRIDGE ROAD AT PARSONS RD

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 27-006

3/1/2007 GPLN



- PULLBOX, TYPE 2
- PULLBOX, TYPE 3
- PULLBOX, TYPE 6
- PULLBOX, TYPE 7

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SCALE IN FEET
0 50 100 200

REVISION DATES		

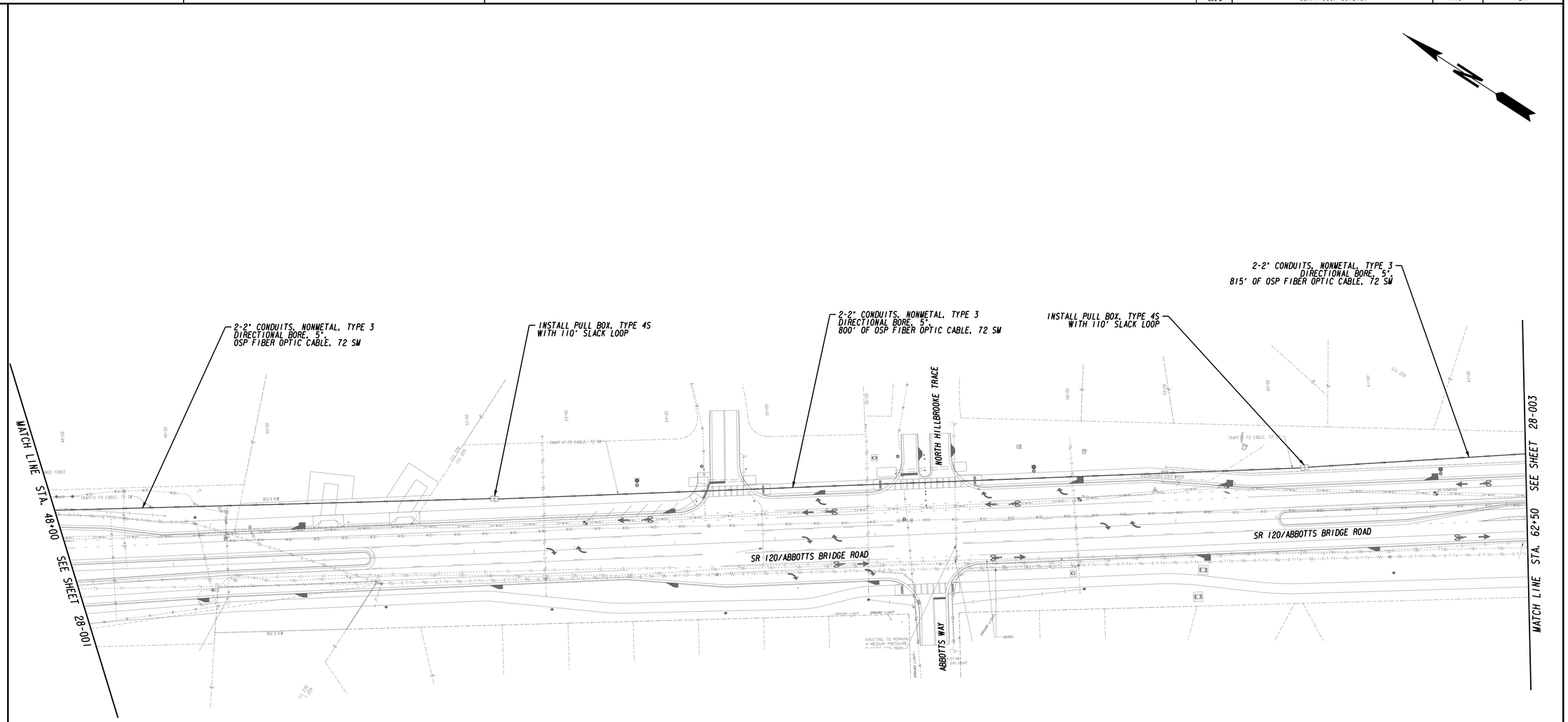
CITY OF JOHNS CREEK
PUBLIC WORKS

ATMS PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
28-001

3/1/2007 GPLN



- PULLBOX, TYPE 2
- PULLBOX, TYPE 3
- PULLBOX, TYPE 6
- PULLBOX, TYPE 7

Johns Creek

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SCALE IN FEET
0 50 100 200

REVISION DATES		

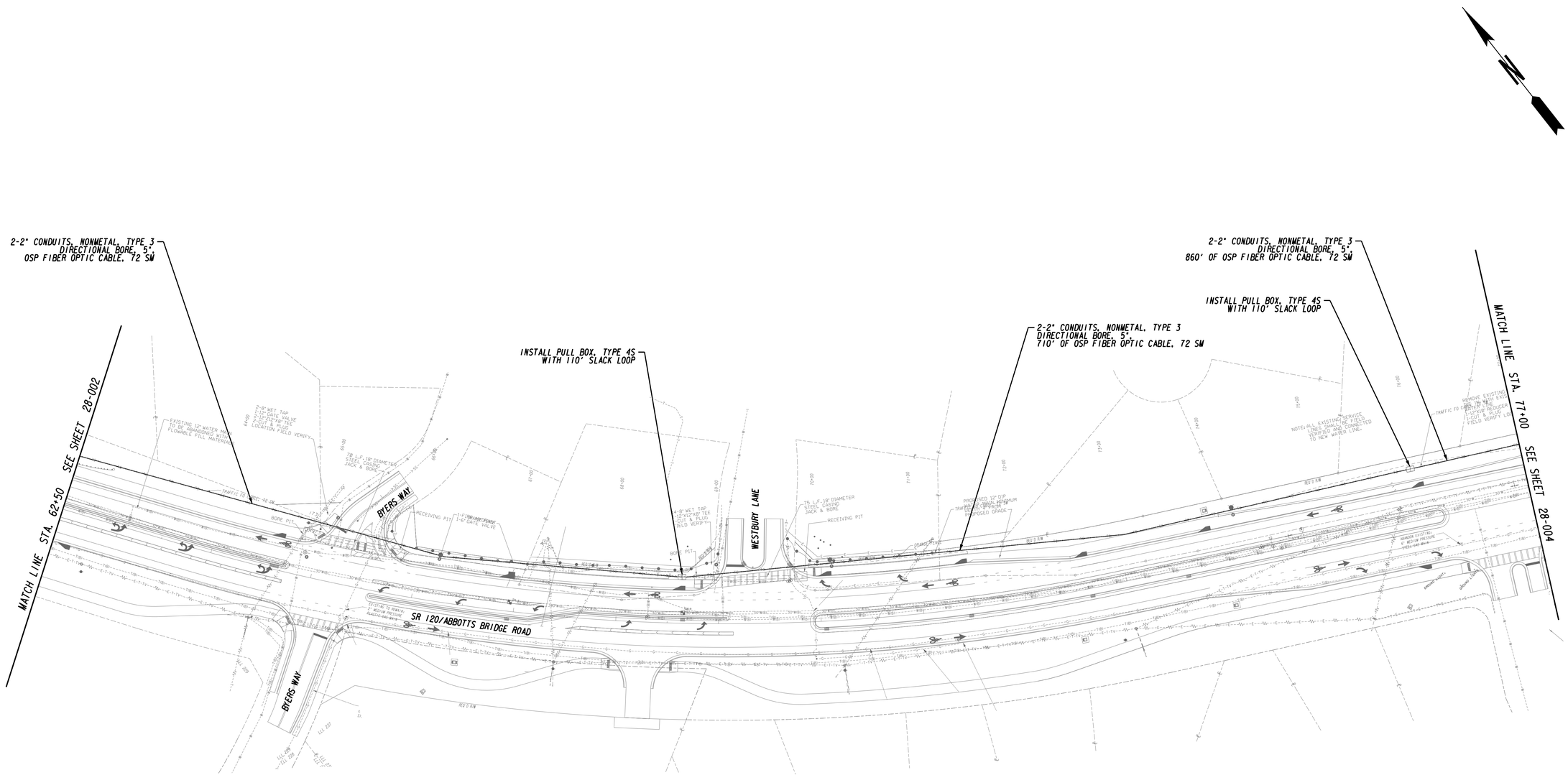
CITY OF JOHNS CREEK
PUBLIC WORKS

ATMS PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
28-002

3/1/2007 GPLN



- PULLBOX, TYPE 2
- PULLBOX, TYPE 3
- PULLBOX, TYPE 6
- PULLBOX, TYPE 7

Johns Creek

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SCALE IN FEET
0 50 100 200

REVISION DATES		

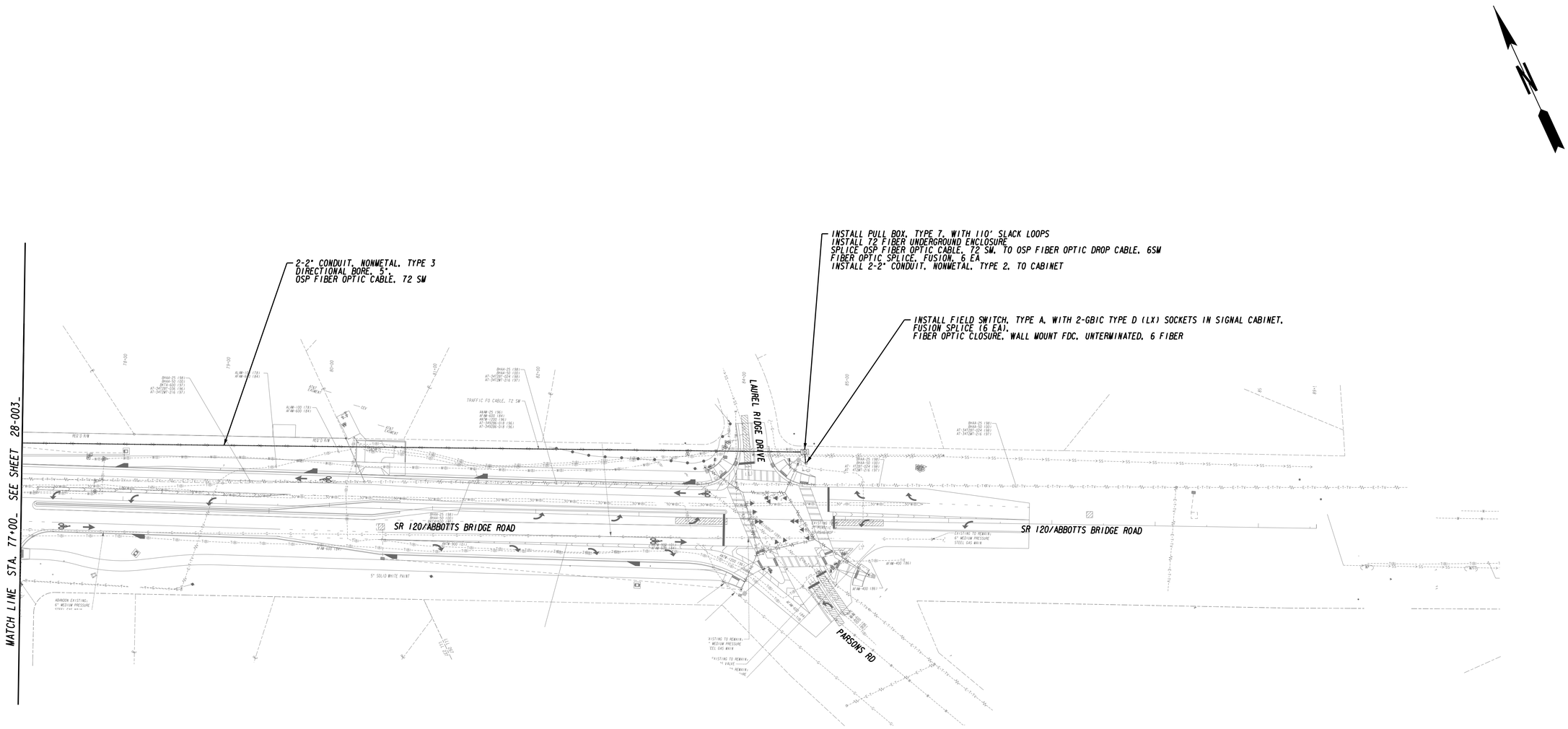
CITY OF JOHNS CREEK
PUBLIC WORKS

ATMS PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
28-003

3/1/2007 GPLN



- PULLBOX, TYPE 2
- PULLBOX, TYPE 3
- PULLBOX, TYPE 6
- PULLBOX, TYPE 7

Johns Creek

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SCALE IN FEET
0 50 100 200

REVISION DATES		

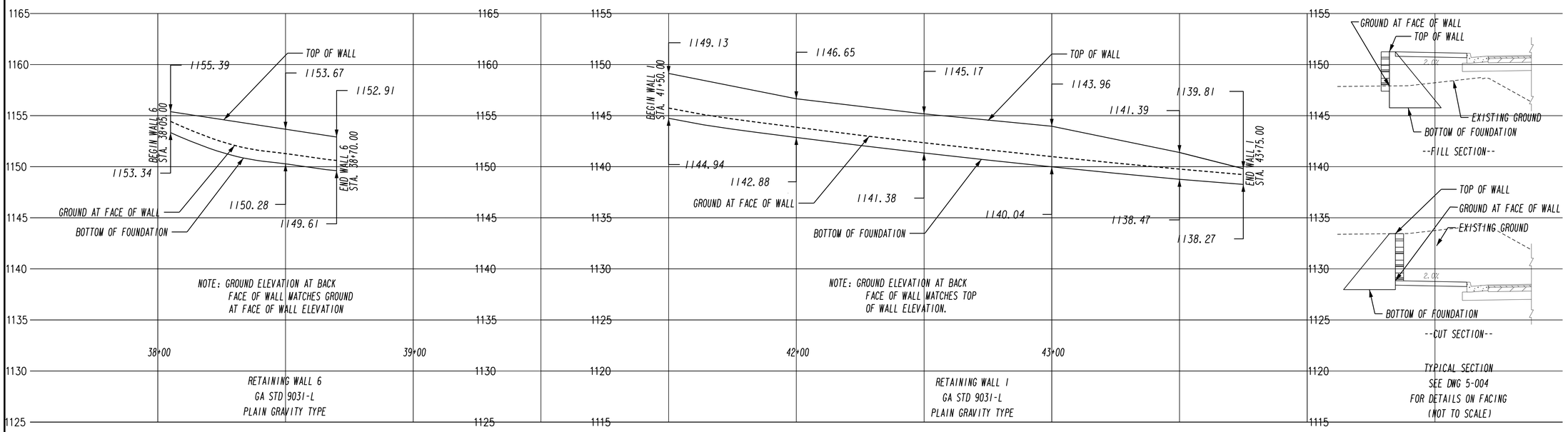
CITY OF JOHNS CREEK
PUBLIC WORKS

ATMS PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
28-004

3/1/2007 GPLN



NOTE: RETAINING SHOWN IN ORDER OF CENTERLINE STATIONING, NOT SEQUENCE OF RETAINING WALLS.

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SCALE IN FEET
0 20 40 80

REVISION DATES

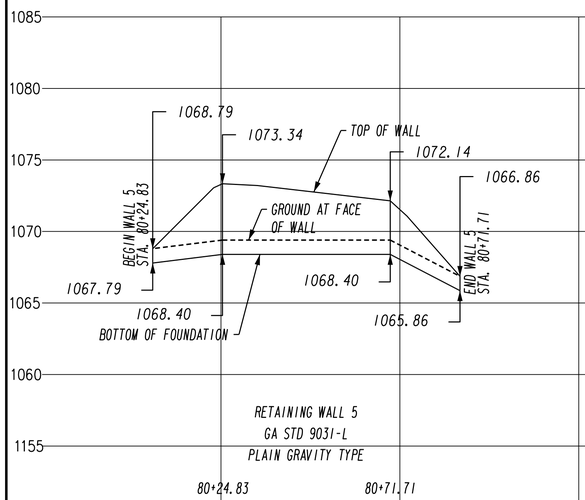
CITY OF JOHNS CREEK
PUBLIC WORKS

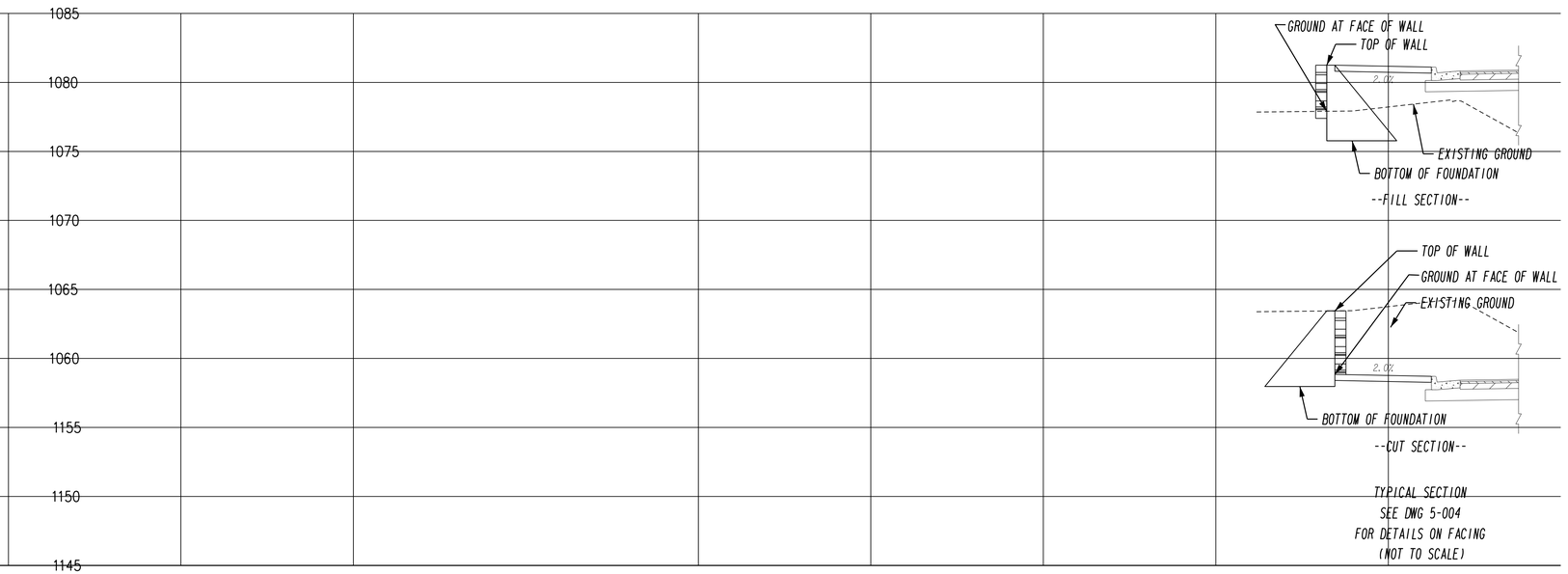
RETAINING WALL ENVELOPES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
31-001

3/1/2007 GPLN





NOTE: RETAINING SHOWN IN ORDER OF CENTERLINE STATIONING, NOT SEQUENCE OF RETAINING WALLS.

Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

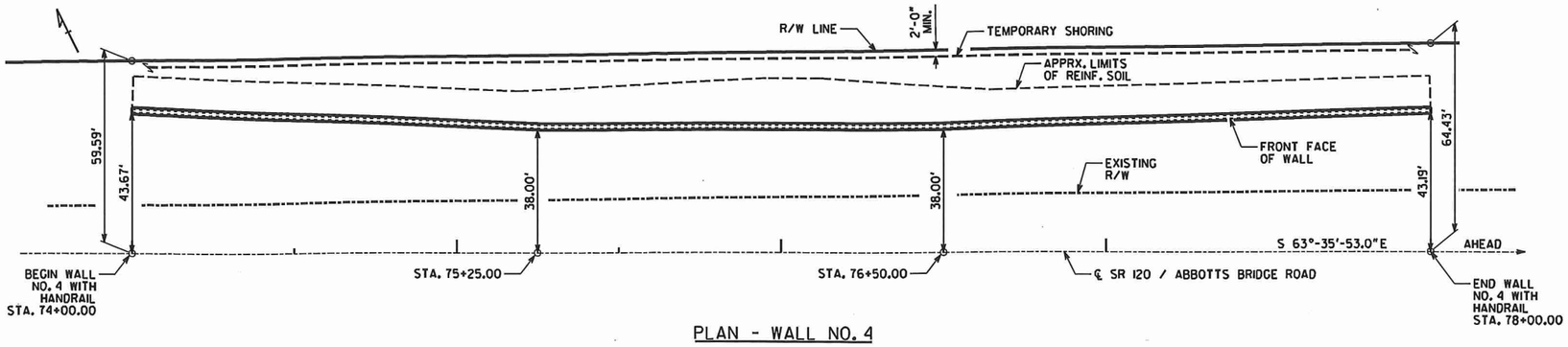
RETAINING WALL ENVELOPES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

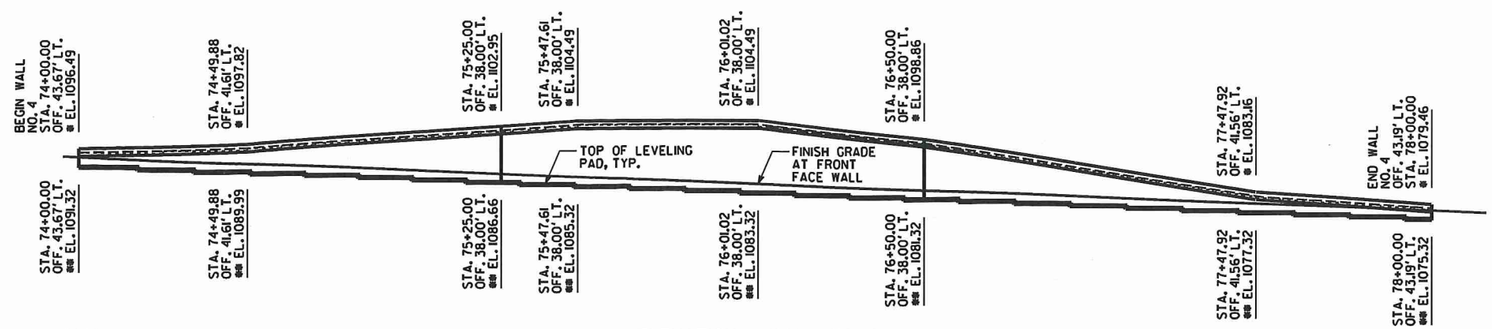
DRAWING NO.
31-002

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	[illegible]	[illegible]

NOTE: APPROXIMATE LIMITS OF REINFORCED SOIL SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHOP DRAWINGS SHALL INCLUDE EXACT LIMITS OF REINFORCED SOIL.

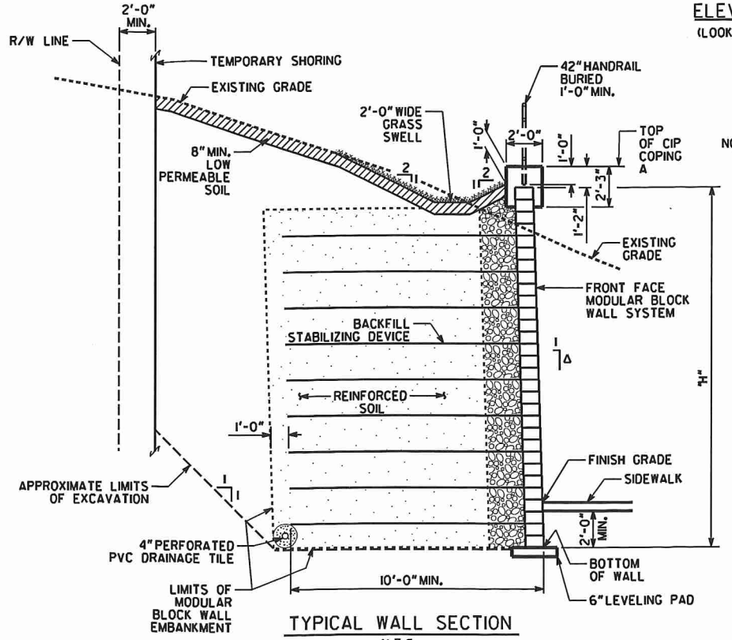


PLAN - WALL NO. 4



ELEVATION - WALL NO. 4

(LOOKING AT FRONT FACE OF WALL)



TYPICAL WALL SECTION

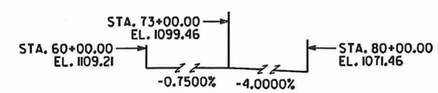
N.T.S.

* DENOTES: ELEVATIONS SHOWN ARE AT TOP OF COPING.

** DEONTES: ELEVATIONS SHOWN ARE MAXIMUM ELEVATIONS AT THE TOP OF LEVELING PAD.

NOTE: STEPS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHOP DRAWINGS SHALL INCLUDE EXACT LOCATION AND ELEVATION OF STEPS.

Δ DENOTES: WALL BATTER TO BE DETERMINED BY CONTRACTOR.



VERTICAL CURVE DATA

℄ SR 120 / ABBOTTS BRIDGE RD

SUMMARY OF QUANTITIES

RETAINING WALL NO. 4

PAY ITEM NUMBER	QUANTITY	UNIT	PAY ITEM
515-2020	403	LF	GALV STEEL PIPE HANDRAIL, 2 IN, ROUND
630-0010	4,444	SF	SEGMENTAL CONCRETE FACING UNITS, WALL NO. 4
630-0200	2,037	CY	MODULAR BLOCK RETAINING WALL BACKFILL MATERIAL, WALL NO. 4
630-0400	403	LF	MODULAR BLOCK RETAINING WALL CAST-IN-PLACE COPING A, WALL NO. 4

GENERAL NOTES

1. SPECIFICATIONS: GEORGIA STANDARD SPECIFICATIONS, 2013 EDITION AND APPLICABLE SUPPLEMENTAL SPECIFICATIONS, AS MODIFIED BY CONTRACT DOCUMENTS.

2. MODULAR BLOCK RETAINING WALL SHALL BE KEYSTONE KEYSYSTEM I RETAINING WALL SYSTEM BY CONTECH CONSTRUCTION PRODUCTS OR MESA RETAINING WALL SYSTEM BY TENSAR INTERNATIONAL, INC.

3. GEORGIA DOT STANDARD DETAILS FOR CAST-IN-PLACE COPING A SHALL BE UTILIZED AND MODIFIED AS NECESSARY.

4. REINFORCING STEEL: PLACE AND TIE ALL REINFORCING STEEL IN ACCORDANCE WITH THE GEORGIA DOT SPECIFICTIONS. DO NOT WELD REINFORCING STEEL.

5. CONCRETE COVER: MAINTAIN 2" COVER MINIMUM ON ALL REINFORCING STEEL.

6. STATIONS ARE SHOWN ALONG ℄ SR 120 / ABBOTTS BRIDGE RD AND OFFSETS ARE MEASURED TO THE FRONT FACE OF THE WALL.

7. TEMPORARY SHORING: PROVIDE TEMPORARY SHORING AS NECESSARY FOR WALL CONSTRUCTION. ALL LABOR AND MATERIALS RELATED TO SHORING SHALL BE INCLUDED IN PRICE BID FOR OTHER ITEMS.

8. JOINTS: PROVIDE 1" EXPANSION JOINTS IN COPING AS REQUIRED BY DESIGN.

9. WALL PLANS: THE RETAINING WALL IS CONSIDERED A CONTRACTOR DESIGN. THESE WALL PLANS ARE CONCEPTUAL AND ARE FOR ILLUSTRATIVE PURPOSES ONLY. EXACT NUMBER OF SOIL REINFORCING STRIPS, THEIR LOCATIONS AND LENGTHS, WALL BATTER, AND STEPS IN FOUNDATION SHALL BE PROVIDED BY THE CONTRACTOR FOR THE WALL SYSTEM BID. THE PRESENCE OF THESE CONCEPTUAL PLANS IN THE CONTRACT DOCUMENTS IN NO WAY RELIEVES THE CONTRACTOR FROM PROVIDING A WALL SYSTEM WHICH PROVIDES STRUCTURAL ADEQUACY, IN ACCORDANCE WITH SECTION 630 OF THE GEORGIA DOT SPECIFICATIONS, AT THE BID PRICE.

10. INCIDENTAL ITEMS: INCLUDE THE COST INCIDENTAL TO THE WORK THAT IS NOT SPECIFICALLY COVERED BY THE GEORGIA STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND/OR SPECIAL PROVISIONS IN THE OVERALL BID SUBMITTED. THIS INCLUDES THE COST OF JOINT FILLERS, WATERPROOFING, AND OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK.

11. HANDRAIL: CONTRACTOR SHALL DESIGN, FABRICATE, AND INSTALL GALVANIZED, STRUCTURAL STEEL 2" NOM. DIA. HANDRAIL IN ACCORDANCE WITH SECTION 515 OF THE GEORGIA DOT SPECIFICATIONS AND THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS TO THE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

GEOTECHNICAL DESIGN PARAMETERS:

THE FOLLOWING RECOMMENDED SOIL PARAMETERS ARE BASED ON THE WALL FOUNDATION REPORT NO. 1159755, PREPARED BY UNIVERSAL ENGINEERING SCIENCES, DATED SEPTEMBER 9, 2014.

ALLOWABLE SOIL PRESSURE	4.0 KSF
COHESION	0 PSF
ANGLE OF INTERNAL FRICTION	34°
UNIT WEIGHT	115 PSF
COEFFICIENT OF SLIDING FRICTION	0.45

NOTE: IF WALL FOUNDATION DESIGN PRESSURE EXCEEDS THE MAXIMUM ALLOWABLE PRESSURE NOTED ABOVE, THEN CONSTRUCT THE WALL TO THE HEIGHT EQUIVALENT TO THE ALLOWABLE BEARING PRESSURE. AFTER A 30 DAY WAITING PERIOD, THE WALL MAY BE CONSTRUCTED TO ITS FINAL HEIGHT.

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 27432 ARUNAVA SAHA

4/22/15

Stantec
STANTEC CONSULTING SERVICES, INC.
2310 PARKLAKE DR., NE, SUITE 400
ATLANTA, GA 30345-2915
PHONE: (770) 493-0450

GEORGIA
CITY OF JOHNS CREEK
PUBLIC WORKS

PLAN AND ELEVATION - WALL NO. 4
SR 120/ABBOTTS BRIDGE RD
JONES BRIDGE RD TO PARSONS RD
FULTON COUNTY CSHPP-0007-00(310)

SCALE: 1" = 20'-0" NOVEMBER 2014

DATE	REVISIONS	BY

DRAWING NO. 32-01
WALL SHEET 1 OF 1

DESIGNED JAP | CHECKED AS | REVIEWED WMD
DRAWN JAP | DESIGN GROUP X | APPROVED BFR

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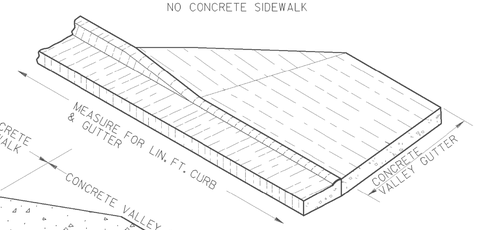
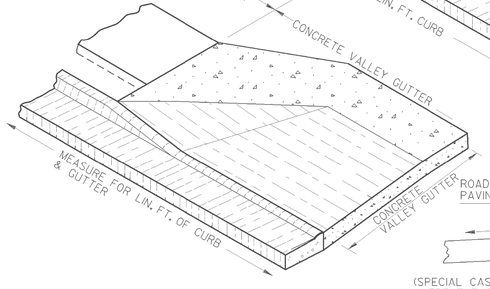
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	124	241

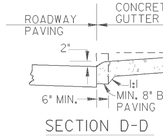
PICTORIAL SECTION
NO CONCRETE SIDEWALK



PICTORIAL SECTION
DRIVEWAY & CONRETE SIDEWALK

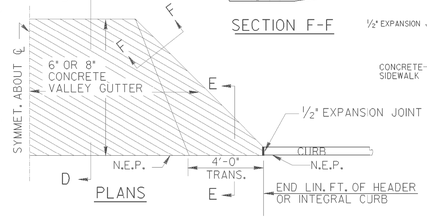


SECTION E-E



SECTION D-D

NOTE:
PLAN VIEW DETAILS NOT SHOWN FOR MODIFIED DRIVES WILL BE SIMILAR TO THAT SHOWN FOR STANDARD DRIVEWYS AT BOTTOM.

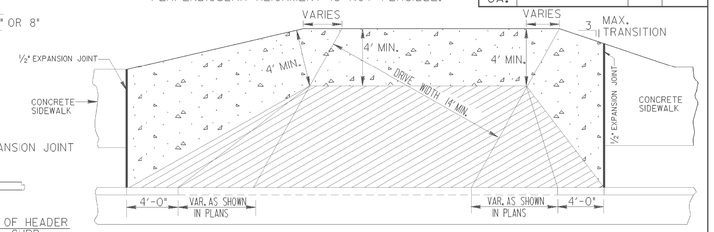


PLANS

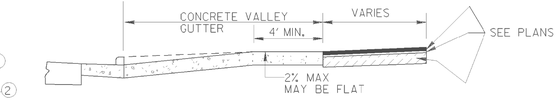
SECTION F-F

DRIVE MODIFIED FOR HEADER OR INTEGRAL CURB ALONG ROADWAY

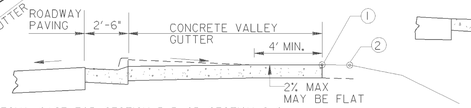
NOTE: DRIVEWAYS WILL NOT BE SKEWED EXCEPT WHERE PERPENDICULAR ALIGNMENT IS NOT FEASIBLE.



DRIVE ENTRANCE MODIFIED FOR SKEW



SECTION WITH ASPHALT PAVING

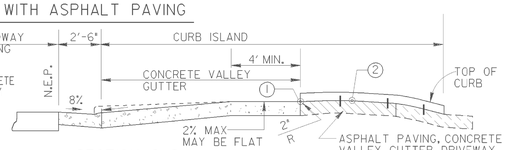


(SPECIAL CASE FOR SECTION B-B OR SECTION C-C, WHERE THE SHOULDER OR SIDEWALK IS SLOPED AWAY FROM THE ROAD)

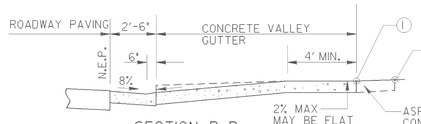
1 IS THE BACK OF SIDEWALK SURFACE GRADE OR THE SHOULDER SURFACE GRADE 10'-0" BACK OF THE CURB. SLOPE OF THE CONCRETE VALLEY GUTTER WILL BE SUCH THAT THE BACK OF THE DRIVEWAY TAPER WILL BE THE SAME ELEVATION.

2 IS BEGINNING OF DRIVEWAY TIE-IN.

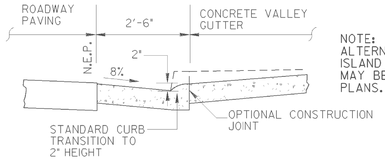
NOTE: 1 AND 2 MAY COINCIDE



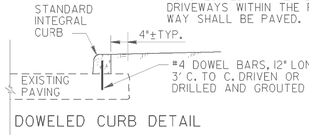
SECTION C-C



SECTION B-B



NOTE:
ALTERNATES TO THE CURB ISLAND DESIGN SHOWN HERE MAY BE SPECIFIED IN THE PLANS.



DOWELED CURB DETAIL

GENERAL NOTES:

1. QUANTITIES SHALL BE MEASURED AS FOLLOWS:
   (A) CONCRETE CURB & GUTTER ALONG ROADWAY---
   LIN. FT. OF CURB & GUTTER SHALL BE MEASURED FOR PAYMENT CONTINUOUS THRU THE DRIVE ENTRANCES. PAYMENT FOR CURB & GUTTER SHALL INCLUDE DAPPING DOWN THE TOP PORTION OF THE CURB. SQ. YDS. OF CONCRETE VALLEY GUTTER SHALL BE MEASURED FOR PAYMENT TO THE BACK OF THE CURB LINE.
   (B) HEADER (OR INTEGRAL) CURB ALONG ROADWAY---
   LIN. FT. OF CURB SHALL BE MEASURED FOR PAYMENT TO THE BEGINNING OF DRIVE WAY. SQ. YDS. OF CONCRETE VALLEY GUTTER SHALL BE MEASURED FOR PAYMENT TO THE EDGE OF THE ROADWAY PAVING.
2. N.E.P. IS DEFINED AS THE POINT WHERE THE ROADWAY PAVING MEETS THE CURB & GUTTER, OR HEADER CURB, OR FACE OR THE INTEGRAL CURB.
3. DRIVES RECONSTRUCTED SHALL BE REPLACED IN KIND, I.E, ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND PAVED TO THE RIGHT OF WAY LINE.
4. SEE STANDARD 9032-B FOR DETAILS OF CONCRETE CURB & GUTTER, HEADER CURBS AND DOWELED INTEGRAL CURBS.
5. WIDTHS OF COMMERCIAL DRIVEWAYS SHALL COMPLY WITH CURRENT "RULES AND REGULATIONS FOR DRIVEWAY AND ENCROACHMENT CONTROL". WIDTHS OF RESIDENTIAL NON-COMMERCIAL DRIVEWAYS SHALL BE AS SPECIFIED IN THE PLANS.
6. THE SLOPE OF THE "TRANSITION AREA" OF THE CONCRETE VALLEY GUTTER SHALL NOT BE STEEPER THAN 8% (12:1) WHERE SIDEWALKS ARE LOCATED.
7. MAXIMUM DRIVEWAY GRADES SHOWN BELOW ARE INTENDED FOR RESIDENTIAL DRIVEWAYS WHERE FLATTER GRADES ARE NOT FEASIBLE. GRADES FOR COMMERCIAL DRIVEWAYS OR FOR TRUCKS SHALL NOT BE GREATER THAN 11% UNLESS SPECIFIED OTHERWISE.

Guidelines For Usage On Metric Projects

When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1" =25mm, 4"=100mm, and 12" or 1' =300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

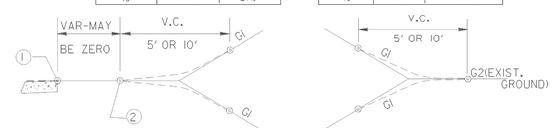
1 IS THE BACK OF SIDEWALK SURFACE GRADE OR THE SHOULDER SURFACE GRADE 10'-0" BACK OF THE CURB. SLOPE OF THE CONCRETE VALLEY GUTTER WILL BE SUCH THAT THE BACK OF THE DRIVEWAY TAPER WILL BE THE SAME ELEVATION.

2 IS BEGINNING OF DRIVEWAY TIE-IN.

NOTE: 1 AND 2 MAY COINCIDE

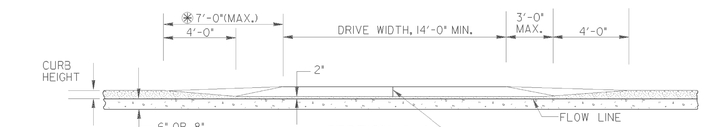
V.C.	MAXIMUM GI	
	CUT	FILL
5'	27%	16.67%
10'	28%	27%

V.C.	GI-G2 (MAX. ALGEBRAIC GRADE CHANGE)	
	SAG	CREST
5'	21%	25%
10'	25%	36%

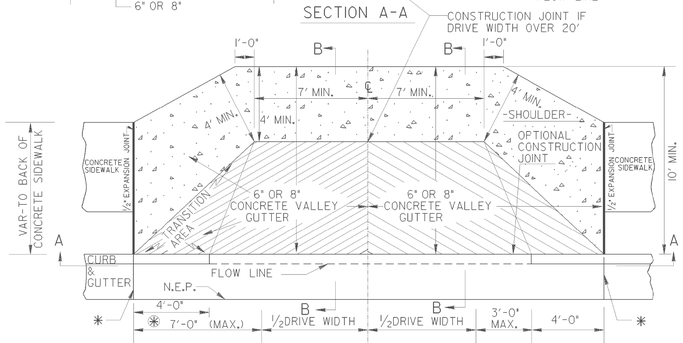


MAXIMUM DRIVEWAY GRADES (SEE GEN. NOTE 7)

This Detail Replaces Ga Standard 6050



SECTION A-A



* CONSTRUCTION JOINT NOT REQUIRED IF THE OPTIONAL CONSTRUCTION JOINT IS PROVIDED AT BACK OF THE CURB.

HALF SECTION — SYMMETRICAL ABOUT THIS SIDE OF CENTERLINE WHERE CONCRETE SIDEWALK OCCURS.

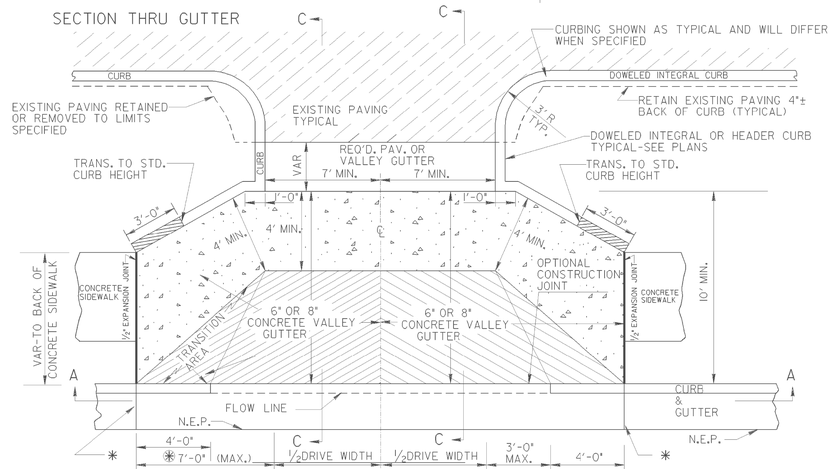
PLAN

HALF SECTION

PLAN

RESIDENTIAL, COMMERCIAL OR NON-COMMERCIAL DRIVE

SECTION THRU GUTTER



HALF SECTION — SYMMETRICAL ABOUT THIS SIDE OF CENTERLINE WHERE CONCRETE SIDEWALK OCCURS.

PLAN

HALF SECTION

PLAN (SHOWN ADJACENT TO EXISTING PAVED PARKING AREA)

* CONSTRUCTION JOINT NOT REQUIRED IF THE OPTIONAL CONSTRUCTION JOINT IS PROVIDED BACK OF CURB.

DRIVEWAY WITH CURB ISLAND

* 7'-0" OR DISTANCE EQUAL TO THAT FROM BACK OF CURB TO BACK OF SIDEWALK, WHICHEVER IS LESSER

BY	REVISION	DATE
GLO	REV. PAVEMENT NOTES, REV. 12' TO 14' MIN., REV. SMALK	7-21-11
	REVISED	4-11-02
	REVISED	4-3-02

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

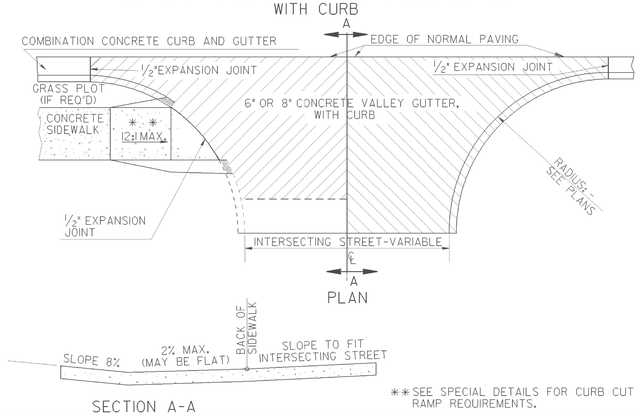
CONSTRUCTION DETAIL
DRIVEWAYS WITH TAPERED ENTRANCES
CONCRETE VALLEY GUTTERS

NO SCALE — MARCH 12, 2002

NUMBER
A1

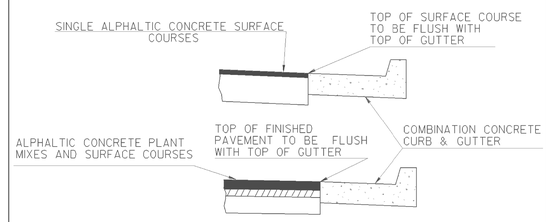
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	125	241

DETAIL OF 6" OR 8" CONCRETE VALLEY GUTTER WITH CURB

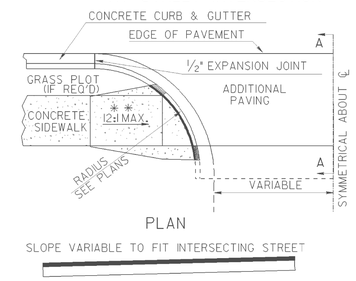


** SEE SPECIAL DETAILS FOR CURB CUT RAMP REQUIREMENTS.

DETAIL OF PLACING PAVEMENT ADJACENT TO GUTTER



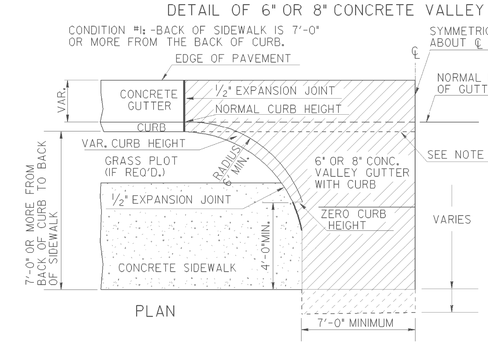
DETAIL OF ADDITIONAL PAVING AT STREET INTERSECTION



NOTE:
ADDITIONAL PAVING TO EXTEND TO END OF RETURN WHEN NO CONCRETE SIDEWALK IS SET UP.

** SEE SPECIAL DETAILS FOR CURB CUT RAMP REQUIREMENTS.

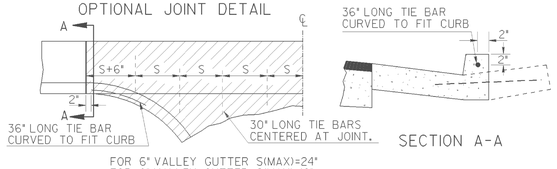
DETAIL OF 6" OR 8" CONCRETE VALLEY GUTTER WITHOUT CURB



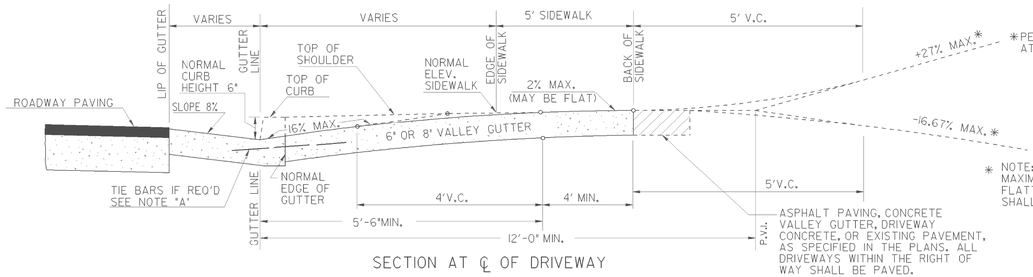
CONDITION #1-BACK OF SIDEWALK IS 7'-0" OR MORE FROM BACK OF CURB.
ZERO CURB HT. TO BE A MINIMUM OF 3'-2" FROM GUTTER LINE. IF CURB TRANSITION EXTENDS PAST EDGE OF SIDEWALK, THE TOP OF THE VARIABLE HEIGHT CURB IS TO REMAIN FLUSH WITH THE TOP OF THE SIDEWALK THROUGHT OUT TRANSITION. ZERO CURB HEIGHT WILL BE A MINIMUM OF 4'-0" FROM BACK OF SIDEWALK.

NOTE: "A"
CONSTRUCTION JOINT OPTIONAL: -WHEN IMPLEMENTED #4 TIE BARS WILL BE REQUIRED AS SHOWN BELOW TO BE INCLUDED IN UNIT PRICE FOR VALLEY GUTTER. IF CURB IS POURED THROUGH VALLEY GUTTER, THE TOP PORTION WILL BE REMOVED BEFORE SETTING TO MATCH GRADE OF VALLEY GUTTER.

OPTIONAL JOINT DETAIL



FOR 6" VALLEY GUTTER S(MAX)=24"
FOR 8" VALLEY GUTTER S(MAX)=16"



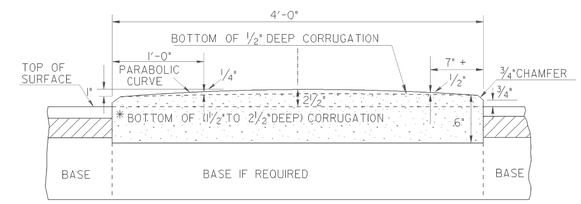
*PERCENTAGE OF ASCENDING GRADE MAY BE INCREASED AT A DISTANCE OF 23' FROM THE GUTTER LINE.

*PERCENTAGE DESCENDING GRADE MAY BE INCREASED AT A DISTANCE 18' FROM THE GUTTER LINE.

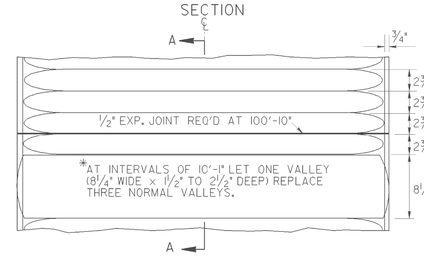
* NOTE:
MAXIMUM DRIVEWAY GRADES SHOWN ABOVE ARE INTENDED FOR RESIDENTIAL DRIVEWAYS WHERE FLATTER GRADES ARE NOT FEASIBLE. GRADES FOR COMMERCIAL DRIVEWAYS OR FOR TRUCKS SHALL NOT BE GREATER THAN 11% UNLESS SPECIFIED OTHERWISE.

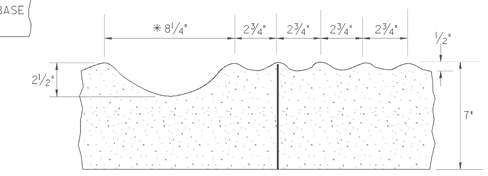
ASPHALT PAVING, CONCRETE VALLEY GUTTER, DRIVEWAY CONCRETE, OR EXISTING PAVEMENT, AS SPECIFIED IN THE PLANS. ALL DRIVEWAYS WITHIN THE RIGHT OF WAY SHALL BE PAVED.

DETAIL OF 4' CORRUGATED CONCRETE MEDIAN



SECTION





SECTION A-A AT CL OF MEDIAN

*APPLIES ONLY TO SUPERELEVATED CURVES, INCLUDING TRANSITIONS.

SEE SPECIAL DETAILS FOR DETAILS OF CONCRETE SIDEWALK.

This Detail Replaces Ga Standard 9031J

Guidelines For Usage On Metric Projects

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BY	REVISION	DATE
GLO	ADDED PAVEMENT NOTE, REV DRIVEWAY SECTION	7-21-11
GLO	REV. PAVEMENT NOTES	2-21-03
	REVISED	4-11-02
	REVISED	4-3-02
	REVISED	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAIL

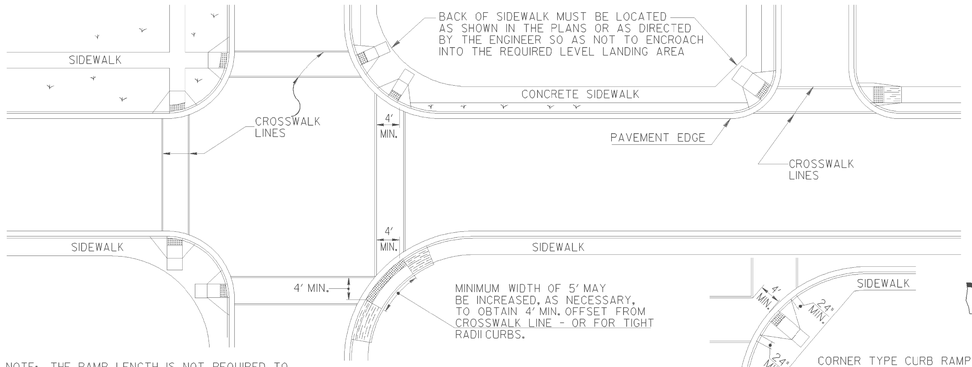
CONCRETE VALLEY GUTTER AT STREET INTERSECTION
6" OR 8" CONCRETE VALLEY GUTTER AT DRIVE
PLACING PAVEMENT ADJACENT TO GUTTER
ADDITIONAL PAVING AT STREET INTERSECTION
4' CORRUGATED CONCRETE MEDIAN

NO SCALE — MARCH 12, 2002

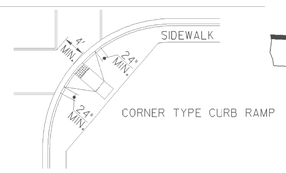
NUMBER
A2

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	126	241

TYPICAL LOCATIONS FOR CURB CUT RAMPS - PLAN VIEW

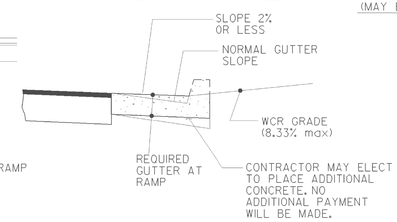


NOTE: THE RAMP LENGTH IS NOT REQUIRED TO EXCEED 15 FEET. THE RAMP SLOPE MAY EXCEED 12:1 IF THE SITE CONDITIONS PREVENT THE USE OF A RAMP 15 FEET LONG.

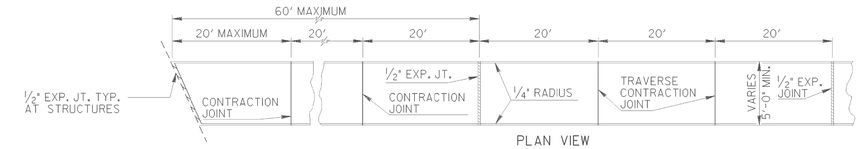


CORNER TYPE CURB RAMP

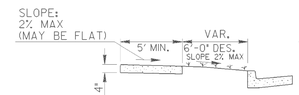
GUTTER TRANSITION DETAIL



CONCRETE SIDEWALK DETAILS



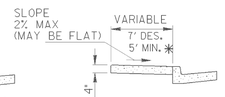
PLAN VIEW



PREFERRED SECTION WITH 6' GRASS STRIP

*16' SHOULDER RECOMMENDED WITH THIS INSTALLATION

ALTERNATE SECTION WITH GRASS STRIP



ALTERNATE SECTION WITHOUT GRASS STRIP

*5' MIN WIDTH WITH NO OBSTRUCTIONS (MAILBOXS, SIGNS, ETC)

7' PREFERRED WIDTH WITH A 2' AREA OF CONTRASTING COLOR & TEXTURE ADJACENT TO THE CURB. (COST OF TEXTURE, COLORING & HOLES REQUIRED FOR MAILBOX AND SIGN POST SHALL BE INCLUDED IN THE PRICE BID FOR SIDEWALK)

NOTES FOR CONCRETE SIDEWALK:

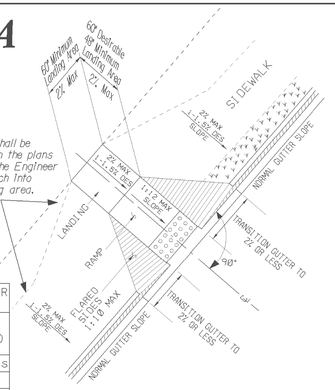
A. CONCRETE TO BE PLACED 4" THICK AND FINISHED WITH TAMPS, WOOD FLOATS AND STIFF-BRISTLE BROOMS.
B. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED AT 20 FT. INTERVALS. ALL EDGES TO BE ROUNDED TO 1/4" RADIUS.
C. 1/2" EXPANSION JOINTS SHALL BE PLACED, WHERE SIDEWALK TIE INTO A STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS AND AT 60' INTERVALS.

NOTES FOR CURB CUT RAMPS:

1. CURB CUT RAMPS WILL BE LOCATED AS FOLLOWS UNLESS PLANS OR CONTRACT SPECIFY OTHERWISE.
   a) AT ALL PEDESTRIAN CROSSWALKS WHERE CURB IS CONSTRUCTED OR REPLACED.
   b) WHERE THE SIDEWALK, CONCRETE OR UNPAVED, IS INTERRUPTED BY THE CURB AT TURNOUTS OR AT INTERSECTIONS.
   c) AT OTHER LOCATIONS SUCH AS HOSPITALS, NURSING HOMES, REST AREAS, ETC., WHERE THE CURB WOULD OTHERWISE BE AN OBSTRUCTION TO THE PHYSICALLY DISABLED.
2. RAMPS WILL BE CONSTRUCTED FROM CONCRETE. SPECIFICATIONS FOR RAMPS WILL BE THE SAME AS FOR CONCRETE SIDEWALK. RAMPS SHALL HAVE EITHER A ROUGH OR A TEXTURED FINISH.
3. DROP INLETS ARE NOT TO BE LOCATED DIRECTLY IN FRONT OF RAMPS. CATCH BASINS SHOULD BE LOCATED AT LEAST 10 FT. FROM RAMPS WHEN FEASIBLE.
4. WHERE RAMPS ARE LOCATED IN RADII, THE DIMENSIONS SHOWN FOR RAMP WIDTHS AND TAPERS ARE MEASURED PERPENDICULAR TO THE RAMP AND NOT ALONG THE CURVE.
5. WHERE UTILITY STRUCTURES CONFLICT, WHERE SIDEWALK GEOMETRY VARIES, AT SKEWED INTERSECTIONS, OR IN OTHER SPECIAL CASES, THE RAMP DESIGNS MAY BE MODIFIED BY THE DESIGNER OR ENGINEER, PROVIDED THAT THE WIDTH REMAINS A MINIMUM OF 48 INCHES, AND NO SLOPE ON THE ACCESSIBLE PART OF THE RAMP IS STEEPER THAN 12:1.
6. LIN. FT. OF CURB AND GUTTER WILL INCLUDE THE TRANSITIONED CURB IN FRONT OF RAMPS. SQ. YDS. OF CONCRETE SIDEWALK AND CONCRETE MEDIAN PAVING WILL INCLUDE RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR CURB RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR SAWING AND REMOVING EXISTING SIDEWALK OR CURB WHERE NECESSARY FOR RAMP CONSTRUCTION.
7. WHEN A CURB RAMP IS PLACED ON EXISTING PAVEMENT. THE PAVEMENT SHALL BE REMOVED TO PROVIDE A MINIMUM THICKNESS OF 3 INCHES OF CONCRETE AT ALL LOCATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVAL OF THE PAVEMENT.
8. DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL INTERSECTIONS WITH PUBLIC STREETS, SIGNALIZED COMMERCIAL DRIVEWAYS, AND COMMERCIAL DRIVEWAYS WITH AN AADT OF 25 VPD.

Type A

(The Prefered Ramp)

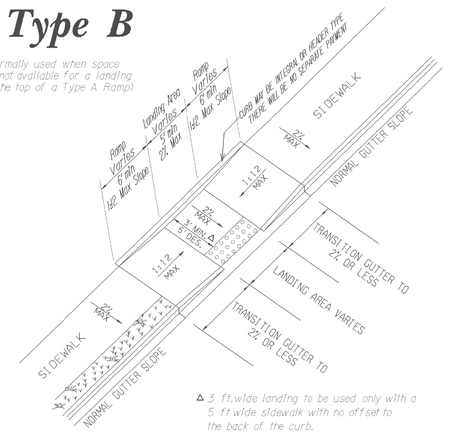


Back of sidewalk shall be located as shown in the plans or as directed by the Engineer so as not to encroach into the required landing area.

LENGHT REQUIRED FOR A 1:10 SLOPE	
DIFFERENCE IN HEIGHT	LENGTH REQUIRED
1 inch	10 inches
2 inches	1'-8"
3 inches	2'-6"
4 inches	3'-4"
5 inches	4'-2"
6 inches	5 feet

Type B

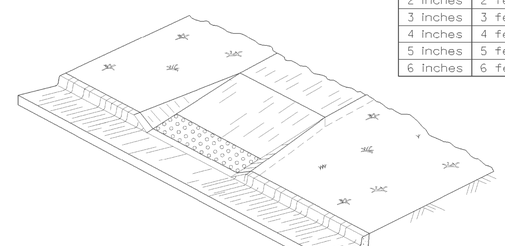
(Normally used when space is not available for a landing at the top of a Type A Ramp)



Δ 3 ft. wide landing to be used only with a 5 ft wide sidewalk with no offset to the back of the curb.

Type D

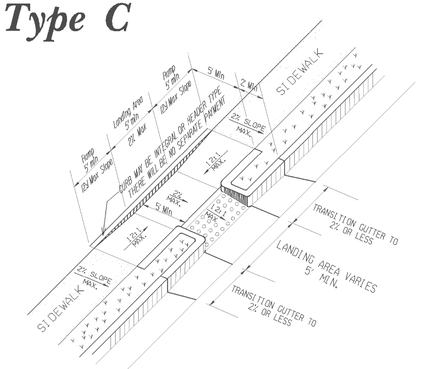
(Normally used when the sidewalk ties directly into the crosswalk)



IN AREAS WHERE THE GUTTER HAS A SLOPE 1" IN 1' END NORMAL GUTTER SLOPE AT A DISTANCE OF 6 TO 10 FEET FROM THE RAMP AND BEGIN TRANSITION TO A FLAT GUTTER SLOPE. NORMAL GUTTER SLOPE SHALL BE RESUMED AT A SIMILAR DISTANCE BEYOND THE RAMP.

LENGHT REQUIRED FOR A 1:2 SLOPE	
DIFFERENCE IN HEIGHT	LENGTH REQUIRED
1 inch	1 foot
2 inches	2 feet
3 inches	3 feet
4 inches	4 feet
5 inches	5 feet
6 inches	6 feet

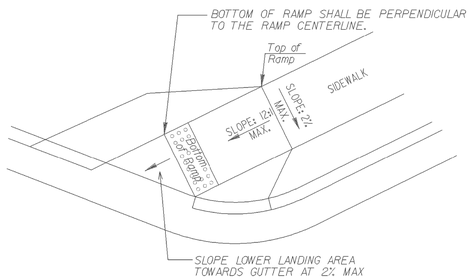
Type C

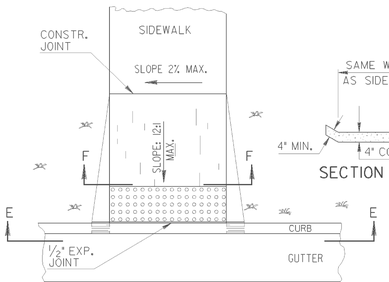


Skewed Ramp Details

(Applies to Type A & Type D Ramps Only)

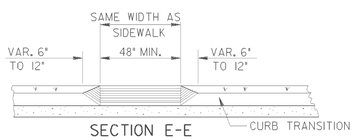
WHEN THE RAMP CENTERLINE IS NOT PERPENDICULAR TO THE CURB A LEVEL LANDING AREA WITH SLOPES LESS THAN 2% MUST BE PROVIDED AT THE BOTTOM OF THE RAMP.





PLAN VIEW

SECTION F-F



SECTION E-E

This Detail Replaces Ga Standard 9031W

Guidelines For Usage On Metric Projects

When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise converston to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" converston factors: 1" =25mm, 4"=100mm, and 12" or 1' =300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

GLO	REV. SLOPES TO PERCENT AND ADDED 12:1 & 10:1CHART.	6-18-09
GLO	ADDED GEN. NOTE NO. 8. REV. TRUNCATED DOMES	5-10-06
	REVISED	2-21-03
	REVISED	2-10-03
	REVISED	7-29-02
	REVISED	5-29-02
	REVISED	5-23-02
	REVISED	5-13-02
	REVISED	4-29-02
	REVISED	4-11-02
	REVISED	4-3-02
	REVISED	3-28-02
	REVISION	DATE

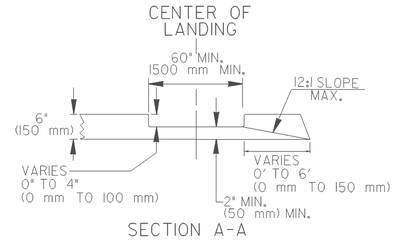
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL DETAIL
CONCRETE SIDEWALK DETAILS
CURB CUT (WHEELCHAIR) RAMPS

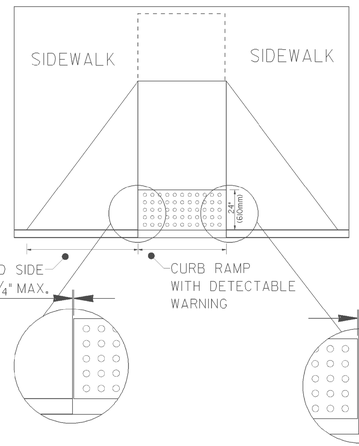
NO SCALE — MARCH 12, 2002

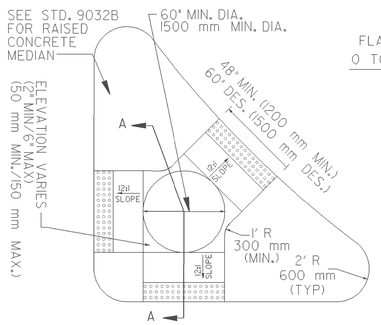
NUMBER A3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	127	241

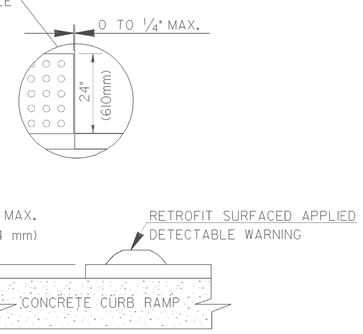


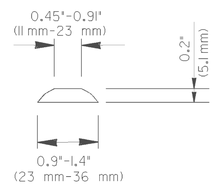
SECTION A-A





CONCRETE ISLAND WITH ELEVATED CUT THROUGH





SIZE: DETECTABLE WARNINGS SHALL BE 24 INCHES (610 mm) IN THE DIRECTION OF PEDESTRAIN TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.

LOCATION: THE DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE OR OTHER POTENTIAL HAZARD IS 6 TO 8 INCHES (150 mm to 180mm) FROM THE CURB LINE OR OTHER POTENTIAL HAZARD, SUSH AS A REFLECTIVE POOL EDGE OR THE DYNAMIC ENVELOPE OF RAIL OPERATIONS.

DOME SIZE AND SPACING: TRUNCATED DOMES SHALL HAVE A BASE DIAMETER OF 0.9 INCH TO 1.4 INCH (23mm-36mm) AT THE BOTTOM, A DIAMETER OF 0.45 INCH TO 0.91 INCH (11mm-23mm) AT THE TOP, THE TOP DIAMETER SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMENTER, A HEIGHT OF 0.2 INCH (5.1mm) AND A CENTER-TO-CENTER SPACING OF 2.40 INCHES (61mm) DESIRABLE 1.60 INCHES (41mm) MINIMUM MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT. DOMES SHALL HAVE A SQUARE ARRANGEMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

VISUAL CONTRAST: DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH THE ADJACENT WALKING SURFACE EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE VISUAL CONTRACT SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE.

MATERIALS:

NEW CONSTRUCTION

THE DETECTABLE WARNINGS SHALL BE MADE OF MATERIALS SPECIFIED ON QPL 87.

RETROFIT OF EXISTING RAMPS

SURFACED APPLIED MATERIALS WILL ONLY BE APPROVED TO BE USED ON EXISTING WHEELCHAIR RAMPS.

INSTALLATION:

BRICK PAVERS SHALL BE SET IN A WET MORTAR BED. THE BED SHALL BE PLACED ON CONCRETE. THE CONCRETE SHALL BE A MINIMUM OF 4" THICK.

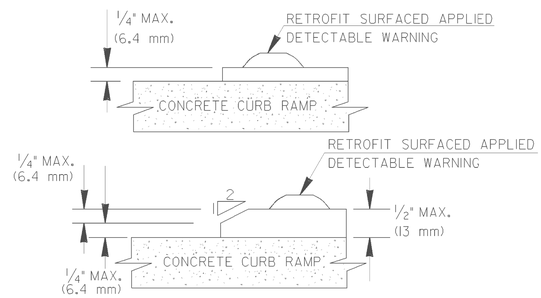
CERAMIC TILE SHALL BE EPOXIED IN PLACE OR SET IN A WET MORTAR BED. MANUFACTURER RECOMMEND ADHESIVE OR FASTENER SHALL BE USED IN THE INSTALLATION.

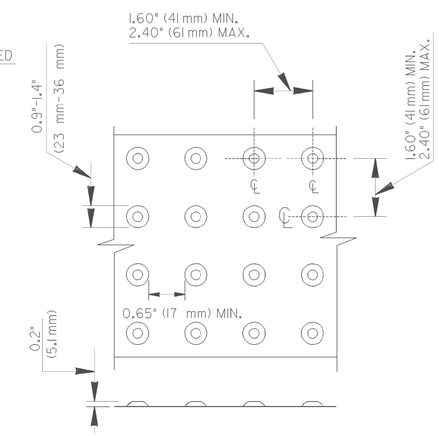
ALL OTHER MATERIALS SHALL BE INSTALLED ACCORDING TO MANUFACTURES DETAILS OR INSTRUCTION.

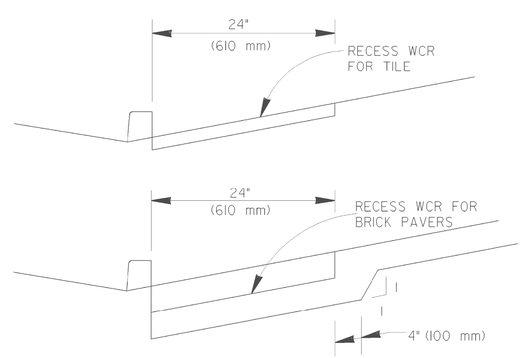
GENERAL NOTES:

RETROFIT SURFACED APPLIED MATERIALS ONLY:

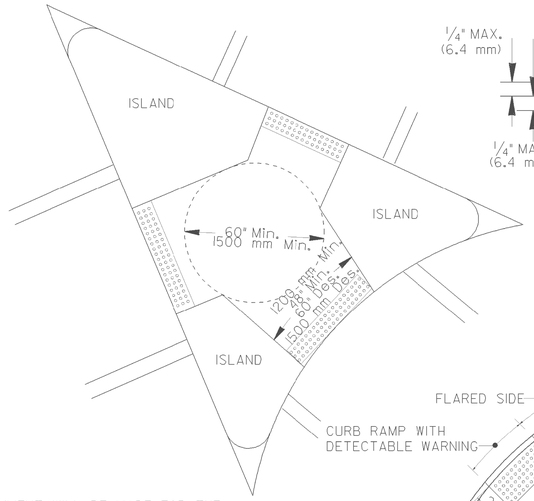
1. CHANGES IN LEVEL OF 1/4" (6.4 mm) HIGH MAXIMUM SHALL BE PERMITTED VERTICALLY ON SURFACED APPLIED MATERIALS.
2. CHANGES IN LEVEL BETWEEN 1/4" (6.4 mm) HIGH MINIMUM AND 1/2" (13mm) HIGH MAXIMUM SHALL BE BELEVELED WITH A SLOPE NOT STEEPER THAN 2:1.

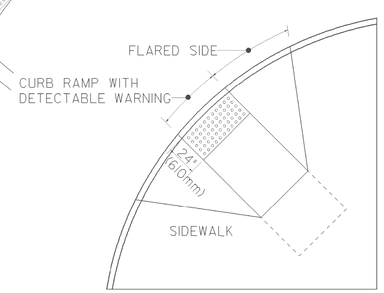




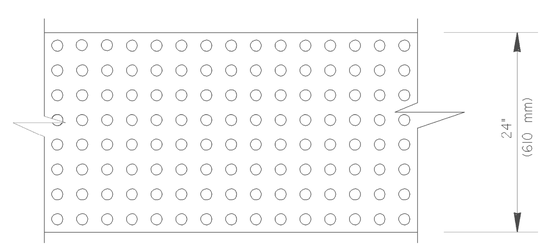


FOR TILE OR BRICK PAVERS NO VERTICAL LIP OVER 1/8" (3 mm) IS ALLOWED





DETAIL FOR DETECTABLE WARNING AT CUT-THRU CONCRETE ISLAND



NO SEPARATE PAYMENT WILL BE MADE FOR THE DETECTABLE WARNINGS. THE COST SHALL BE INCLUDED IN THE PRICE BID FOR SIDEWALK (OR CURB CUT RAMP IF THE ITEM IS INCLUDED IN THE PROPOSAL).

FOR CUT-THRU ISLANDS AND EXISTING RAMPS, WHERE NO SIDEWALK OR CURB CUT RAMPS ARE IN THE PROPOSAL. THE COST OF THE DETECTABLE WARINGS SHALL BE INCLUDED IN THE OVERALL BID PRICE SUBMITTED.

BY	REVISION	DATE
GLO	ADDED RETROFIT DETAIL AND ADDED ALT. RAMP DETAIL AND GEN. NOTES	6-18-09
GLO	ADDED TOLERANCE TO DTL.	10-2-06
GLO	REVISEDTUNCATED DOMES AND NOTES.	5-10-06
	REVISED	11-14-02
	REVISED	7-29-02

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL DETAIL

DETECTABLE WARNING SURFACE TRUNCATED DOME SIZE, SPACING AND ALIGNMENT REQUIREMENTS

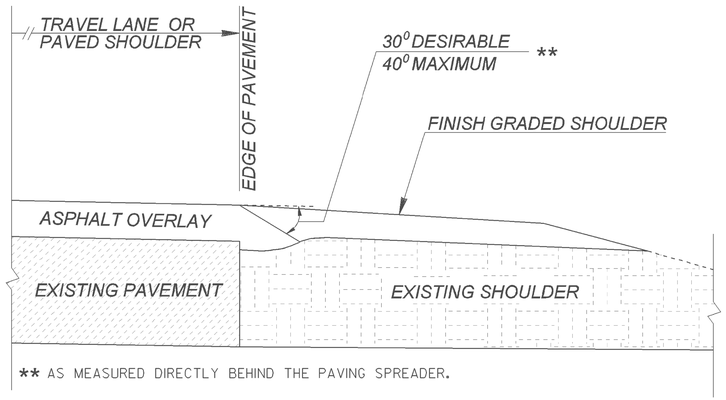
NO SCALE

MARCH 12, 2002

NUMBER
A4

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)128		241

ASPHALT PAVEMENT - OVERLAY

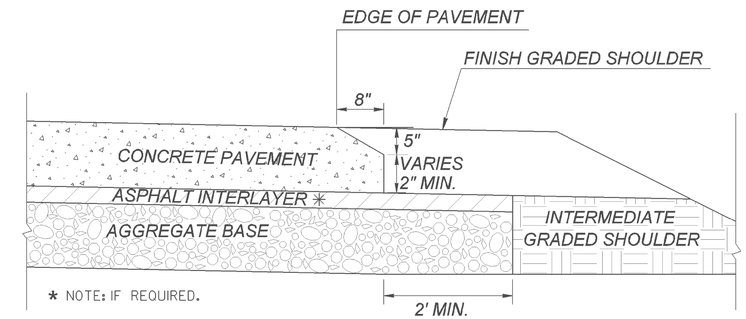


** AS MEASURED DIRECTLY BEHIND THE PAVING SPREADER.

ADDITIONAL QUANTITIES:
DEPTH OF OVERLAY (T), NO RUTTING
$(T)^2$ (IN.) X 0.000441 TN/IN.-FT X LENGTH (FT) = _____TN

DEPTH OF OVERLAY (T), WITH 1 IN. RUTTING
$(T)^2$ (IN.) X 0.000441 TN/IN.-FT X LENGTH (FT) + (T) (IN.) X 0.000882 TN/IN.-FT X LENGTH (FT) = _____TN

PLAIN PC CONCRETE PAVEMENT OR ROLLER COMPACTED CONCRETE PAVEMENT



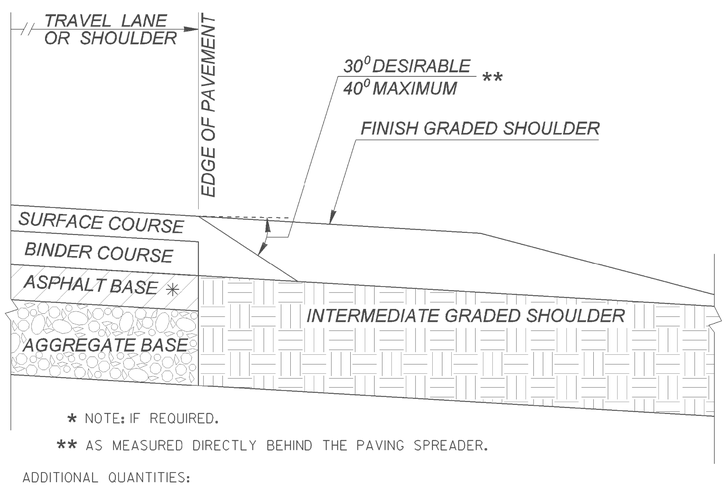
* NOTE: IF REQUIRED.

ADDITIONAL QUANTITIES:
CONCRETE
0.07407 SY/FT X LENGTH (FT) = _____SY

ASPHALT INTERLAYER, IF REQUIRED
(T) IN. X LENGTH (FT) X 0.004074 TN/IN.-FT = _____TN

AGGREGATE BASE (BASED ON 2.07 TN/CY)
(T) IN. X LENGTH (FT) X 0.0042592 TN/IN.-FT = _____TN

ASPHALT PAVEMENT - NEW



* NOTE: IF REQUIRED.

** AS MEASURED DIRECTLY BEHIND THE PAVING SPREADER.

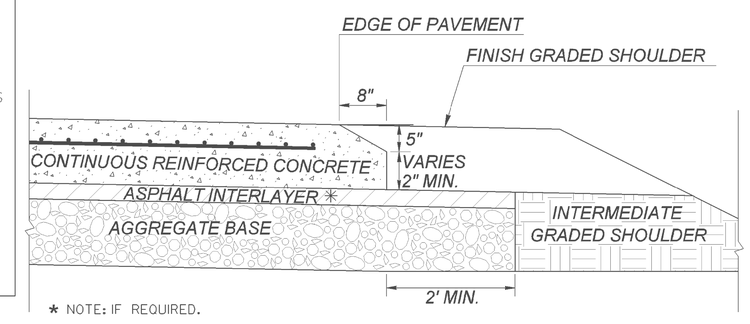
ADDITIONAL QUANTITIES:
SURFACE COURSE PAVING DEPTH (T)
$(T)^2$ (IN.) X 0.000441 TN/IN.-FT X LENGTH (FT) = _____TN

GENERAL NOTES:
1. THE SAFETY EDGE SHALL BE CONSTRUCTED AS AN INTEGRAL OPERATION OF THE ROADWAY PAVEMENT PLACEMENT PROCESS.

(ASPHALT PAVEMENT)

2. USE AN APPROVED MECHANICAL DEVICE THAT WILL:
   1. APPLY COMPACTIVE EFFORT TO THE ASPHALT MIXTURE TO ELIMINATE OBJECTABLE VOIDS AS THE MIXTURE PASSES THROUGH THE WEDGE DEVICE.
   2. PRODUCE A WEDGE WITH A UNIFORM TEXTURE, SHAPE, AND DENSITY WHILE AUTOMATICALLY ADJUSTING TO VARYING HEIGHTS ENCOUNTERED ALONG THE ROADWAY SHOULDER.
3. A SINGLE-PLATE STRIKE-OFF METHOD SHALL NOT BE USED FOR BITUMINOUS PAVING, AS THE SINGLE-PLATE STRIKE-OFF METHOD HAS BEEN FOUND TO PRODUCE A NON-DURABLE EDGE.
4. COMPACTION OF THE EDGE SHOULD NOT BE DONE WITH THE FIRST PASS OF THE ROLLER: WITH THE ROLLER STAYING OFF THE EDGE AT LEAST 6 INCHES. THIS IS IN ORDER TO ALLOW THE EDGE MIX TO SLIGHTLY COOL PRIOR TO COMPACTION.
5. SHORT SECTIONS OF HANDWORK ARE ALLOWED, WHEN NECESSARY, FOR TRANSITIONS AND TURNOUTS.

CONTINUOUS REINFORCED CONCRETE PAVEMENT



* NOTE: IF REQUIRED.

ADDITIONAL QUANTITIES:
CONCRETE
0.07407 SY/FT X LENGTH (FT) = _____SY

ASPHALT INTERLAYER, IF REQUIRED
(T) IN. X LENGTH (FT) X 0.004074 TN/IN.-FT = _____TN

AGGREGATE BASE (BASED ON 2.07 TN/CY)
(T) IN. X LENGTH (FT) X 0.0042592 TN/IN.-FT = _____TN

REVISED ANGLE TOLERANCE	TC	11-15-11	DATE
ANGLE & ADDED NOTE.			REVISION

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

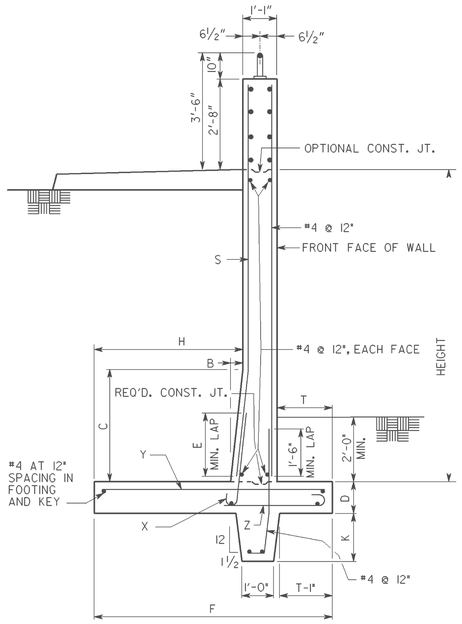
CONSTRUCTION DETAIL
PAVEMENT EDGE TREATMENT
ASPHALT AND CONCRETE PAVEMENT

NO SCALE — SEPTEMBER 2011

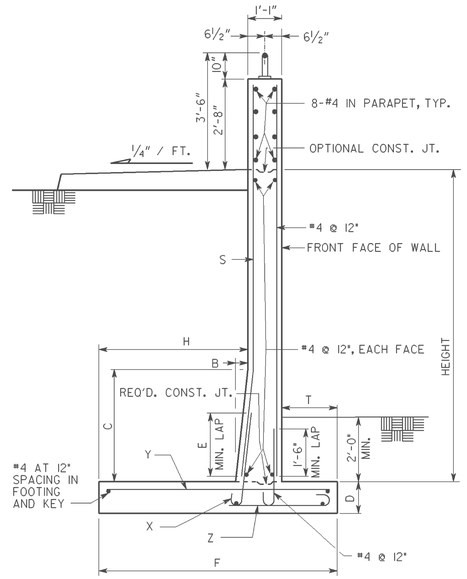
BY		
DES.	B.A.S.	
DRW.	G.L.O.	
CHK.	D.G.P.	
REVIEW	B.A.S.	

NUMBER
P-7

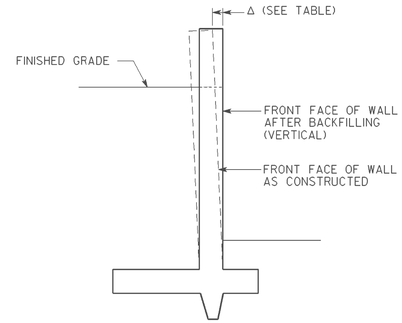
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	129	241



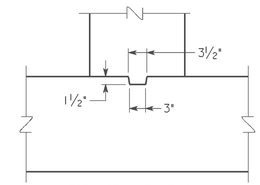
WALL SECTION WITH KEY



TYPICAL WALL SECTION

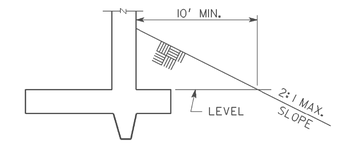


WALL BATTER DETAIL

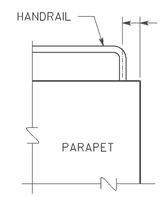


(FOR USE IN FOOTING AND CONTRACTION JOINT.)

SHEAR KEY DETAIL



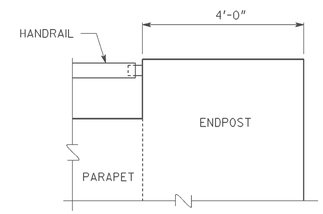
DETAIL FOR SLOPE IN FRONT OF WALL



SECTION AT PARAPET

OPTION 1

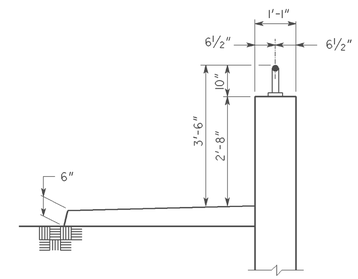
SEE GA. STD. 3054 FOR GUARDRAIL ATTACHMENT DETAILS.



SECTION AT ENDPOST

OPTION 2

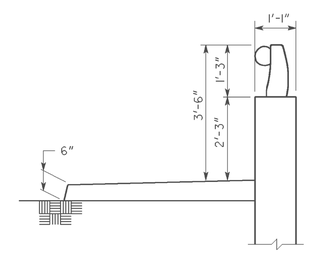
SEE GA. STD. 3054 FOR GUARDRAIL ATTACHMENT DETAILS.



PARAPET AND HANDRAIL DETAIL

OPTION 1

SEE GA. STD. 3054 FOR GUARDRAIL ATTACHMENT DETAILS & GA. STD. 9031-R FOR HANDRAIL ATTACHMENT DETAILS. OPTION 1 SHALL BE USED UNLESS THE PLANS SPECIFY OPTION 2.



PARAPET AND HANDRAIL DETAIL

OPTION 2

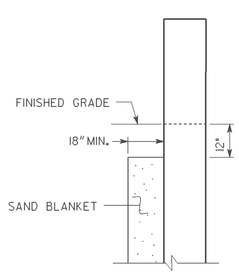
SEE GA. STD. 3054 FOR GUARDRAIL ATTACHMENT DETAILS & GA. STD. 3626 FOR HANDRAIL DETAILS.

NOTES:

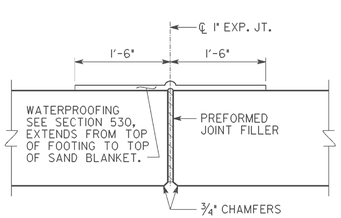
1. AT CONTRACTOR'S OPTION, SIDES OF KEY MAY BE VERTICAL. MAINTAIN WIDTH SHOWN AT TOP OF KEY.
2. PLACE WEEPHOLES AND SAND BLANKET AS SHOWN ON GA. STD. 4948B.
3. PROVIDE A TYPE III FINISH ON ALL EXPOSED CONCRETE SURFACES.
4. PROVIDE 1" EXPANSION JOINTS IN WALL STEM, FOOTING AND KEY AT A MAXIMUM SPACING OF 100'. SPACE EXPANSION JOINTS UNIFORMLY. STOP ALL LONGITUDINAL REINFORCEING STEEL IN THE STEM, FOOTING AND KEY 3" CLEAR OF THE EXPANSION JOINTS.
5. SPACE CONTRACTION JOINTS IN WALL STEM AT 30' MAXIMUM AND 20' MINIMUM. STOP ALL LONGITUDINAL REINFORCING STEEL IN THE STEM 2" CLEAR OF THE CONTRACTION JOINTS.
6. WATERPROOF EXPANSION AND CONTRACTION JOINTS IN THE WALL STEM ON THE BACK SIDE. EXTENT OF WATERPROOFING SHALL BE FROM TOP OF SAND BLANKET TO THE TOP OF FOOTING FOR 1'-6" MINIMUM EACH SIDE OF JOINT. SEE SECTION 530 OF THE GEORGIA DOT SPECIFICATIONS.
7. RETAINING WALL DESIGN DATA:
   SOIL PROPERTIES ---------- ϕ = 28°
   γ = 110 pcf
   μ = 0.45
   CONCRETE ---------- CLASS A, f'_c = 3000 PSI
   REINFORCEMENT STEEL ---------- GRADE 60, f_y = 60,000 PSI
8. A GEOCOMPOSITE WALL DRAIN SELECTED FROM THE DEPARTMENT'S QUALIFIED PRODUCTS LIST IS AN ACCEPTABLE SUBSTITUTE FOR THE SAND BLANKET SHOWN IN THE DRAINAGE DETAILS.
9. MAINTAIN 2" COVER ON ALL REINFORCING STEEL IN THE STEM AND 3" COVER IN THE FOOTING AND KEY.
10. THE WALL WILL BE MEASURED ALONG THE INSIDE FACE OF PARAPET.
11. BACKFILL - PLACE BACKFILL ON FRONT FACE SIDE OF WALL BEFORE BACKFILLING BACK FACE SIDE OF WALL.
12. RETAINING WALL WILL BE PAID FOR PER LINEAR FOOT PARAPET RETAINING WALL TYPE P1, P2 OR P3. INCLUDE COSTS FOR HANDRAIL, WATERPROOFING, EXCAVATION, BACKFILLING, DRAINAGE BLANKET, CONCRETE, REINFORCING STEEL AND ALL INCIDENTALS IN PRICE BID. PAYMENT WILL BE MADE UNDER ITEM NO. 500, PARAPET RETAINING WALL - TYPE P1, P2 OR P3.

△1 NOTE:
PARAPET RETAINING WALL SHALL BE USED ONLY ADJACENT TO ROADWAY TYPICAL SECTIONS WITH CURB AND GUTTER AND SIDEWALKS. NOT TO BE USED ADJACENT TO ROADWAY SHOULDER, BICYCLE TRAFFIC OR FILL SLOPE.

WALL DIMENSIONS									REINFORCEMENT				Δ (INCHES)	DESIGN SOIL PRESSURE	TYPE
HEIGHT	B	C	D	E	F	H	T	K	S	X	Y	Z			
4'	0	0	1'-0"	2'-0"	5'-10"	3'-9"	1'-0"	0	#5 AT 12"	#5 AT 12"	#5 AT 13"	#4 AT 12"	0	2.0 KSF	P1
6'	0	0	1'-0"	2'-0"	6'-7"	4'-3"	1'-3"	0	#5 AT 11"	#5 AT 11"	#5 AT 12"	#4 AT 12"	1/8"	2.0 KSF	
8'	0	0	1'-0"	2'-9"	7'-4"	4'-9"	1'-6"	0	#6 AT 11"	#6 AT 11"	#5 AT 8"	#4 AT 12"	1/4"	2.0 KSF	P2
10'	0	0	1'-3"	3'-9"	7'-10"	5'-0"	1'-9"	0	#7 AT 10"	#7 AT 10"	#6 AT 10"	#4 AT 12"	3/8"	2.5 KSF	
12'	6"	4'	1'-3"	3'-9"	8'-4"	5'-3"	2'-0"	6"	#7 AT 11"	#7 AT 11"	#6 AT 8"	#4 AT 8"	1/2"	3.0 KSF	P3
14'	6"	6'	1'-3"	6'-3"	9'-7"	5'-9"	2'-9"	12"	#9 AT 12"	#9 AT 12"	#8 AT 11"	#5 AT 9"	11/16"	3.0 KSF	

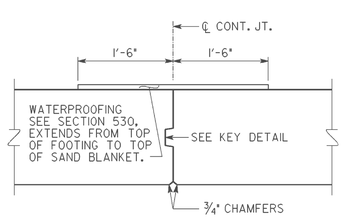


SAND BLANKET DETAIL



DETAIL OF EXPANSION JOINT

SCALE: 1" = 1'-0"



DETAIL OF CONTRACTION JOINT

SCALE: 1" = 1'-0"

DATE	REVISION	BY
7-7-04	ADDED NOTE	SWW

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAIL

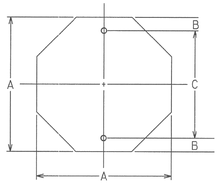
PARAPET RETAINING WALL
TYPE P1, P2 AND P3

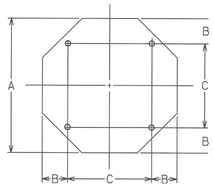
NO SCALE — JULY 2003

DESIGNED SWW
DRAWN KHM/WMC
CHECKED SWW
DESIGN GROUP SWW
REVIEWED JPT/MCD
APPROVED PVL

NUMBER
PW-1

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-001(310)	130	241

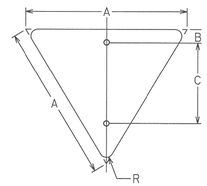


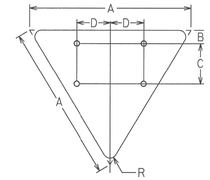


OCTAGON

A	B	C
24	3	18
30	3	24
36	3	30

A	B	C
48	9	30

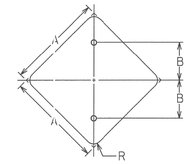


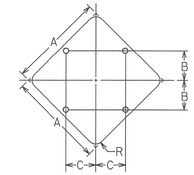


EQUILATERAL TRIANGLE

A	B	C	R
30	3	18	1 1/2
36	3	21	2
48	3	27	3

A	B	C	D	R
60	3	18	15	3



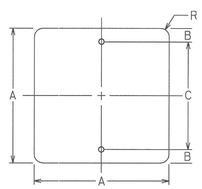


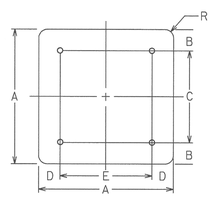
DIAMOND

A	B	R
24	12	1 1/2
30	15	1 7/8
36	18	2 1/4

A	B	C	R
*36	10	10	2 1/4
48	15	15	3
60	18	18	3 3/4

* FOR TWO POST ERECTION

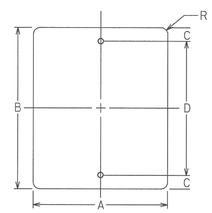


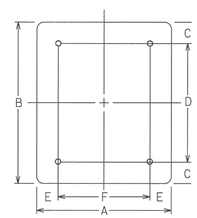


SQUARE

A	B	C	R
18	3	12	1 1/2
24	3	18	1 1/2
30	3	24	1 7/8

A	B	C	D	E	R
36	6	24	6	24	2 1/4
48	6	36	6	36	3

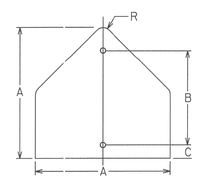


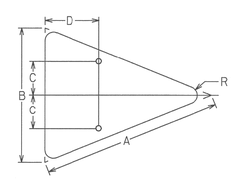


VERTICAL RECTANGLE

A	B	C	D	R
12	18	1 1/2	15	1 1/2
18	24	3	18	1 1/2
24	30	3	24	1 1/2
30	36	3	30	1 7/8

A	B	C	D	E	F	R
36	48	6	36	6	24	2 1/4
48	60	6	48	9	30	3



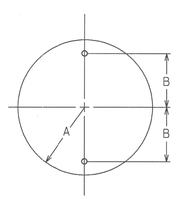


PENTAGON

A	B	C	R
30	21	3	1 7/8
36	24	3	2 1/4

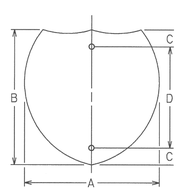
ISOSCELES TRIANGLE

A	B	C	D	R
40	30	7 1/2	12	1 7/8
48	36	9	15	2 1/4



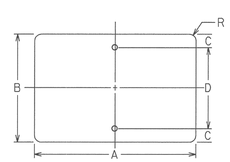
CIRCLE

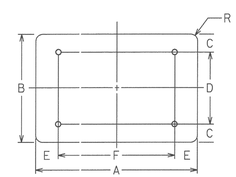
A	B
15	12
18	15



INTERSTATE SHIELD

A	B	C	D
24	24	3	18
30	24	3	18
36	36	6	24
45	36	6	24





HORIZONTAL RECTANGLE

A	B	C	D	R
21	15	1 1/2	12	1 1/2
24	12	1 1/2	9	1 1/2
24	18	3	12	1 1/2
30	15	1 1/2	12	1 1/2
30	24	3	18	1 1/2
36	12	1 1/2	9	1 1/2
36	24	3	18	1 1/2
48	12	1 1/2	9	1 1/2
48	24	3	18	1 7/8

A	B	C	D	E	F	R
48	36	6	24	9	30	2 1/4
60	24	3	18	12	36	1 1/2
60	36	6	24	12	36	2 1/4

DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

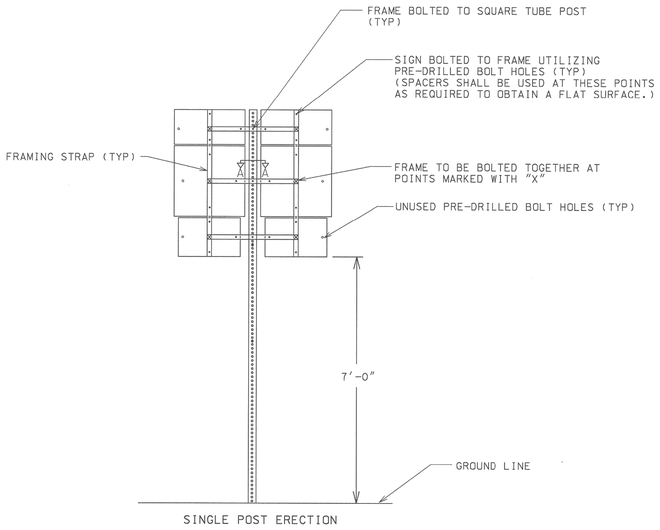
DETAILS OF SIGN PLATES

NO SCALE JANUARY 2000

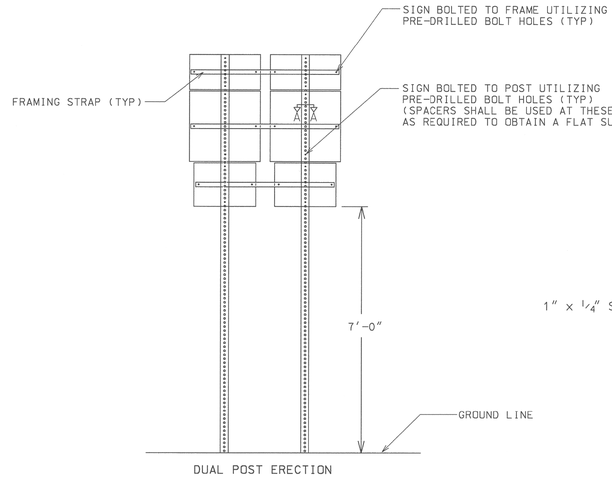
\Odsign plates.dgn Jul 02, 2003 16:16:16

PCBOTB

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	131	241

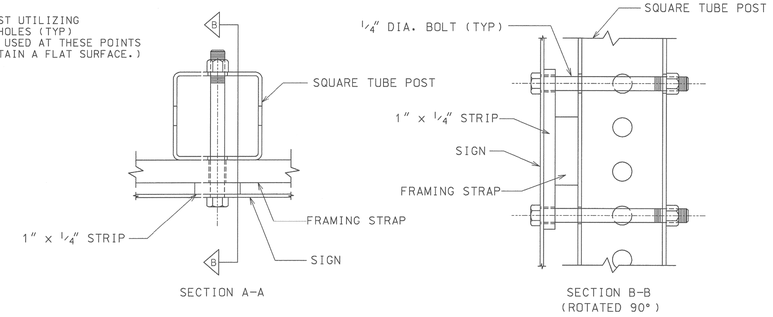


SINGLE POST ERECTION



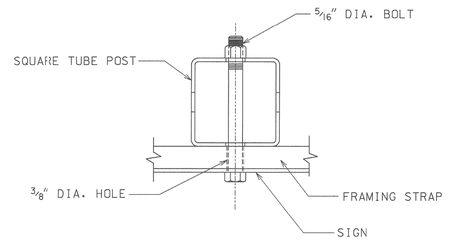
DUAL POST ERECTION

TYPICAL ASSEMBLY UNIT (BACK VIEW)



OPTION #1 - FRAMING STRAP WITHOUT MOUNTING HOLE

(ALL FRAMING STRAPS SHALL BE 1 1/2" x 1/2" x REQUIRED LENGTH)



OPTION #2 - FRAMING STRAP WITH MOUNTING HOLE

(ALL FRAMING STRAPS SHALL BE 2" x 1/2" x REQUIRED LENGTH)

GENERAL NOTES:

1. STYLE OF FRAMING IS OPTIONAL. ALTERNATE DESIGNS ARE ACCEPTABLE UPON APPROVAL OF THE ENGINEER. FRAME SHALL BE DESIGNED SO AS TO HOLD THE ASSEMBLY IN A FIXED, RIGID POSITION.
2. FRAMING STRAPS SHALL BE GALVANIZED STEEL OR ALUMINUM.
3. STEEL SHALL BE A.S.T.M. DESIGNATION A-283, GRADE D, GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-123.
4. ALUMINUM SHALL BE ALLOY 6061-T6.
5. BOLTS, NUTS, WASHERS, AND SPACERS SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.
6. FRAMING STRAPS ON A DUAL POST ERECTION SHALL NOT BE BOLTED TO THE POST.

DATE	REVISIONS
3/31/00	CHANGED U-CHANNEL POST TO SQUARE TUBE POST

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC OPERATIONS

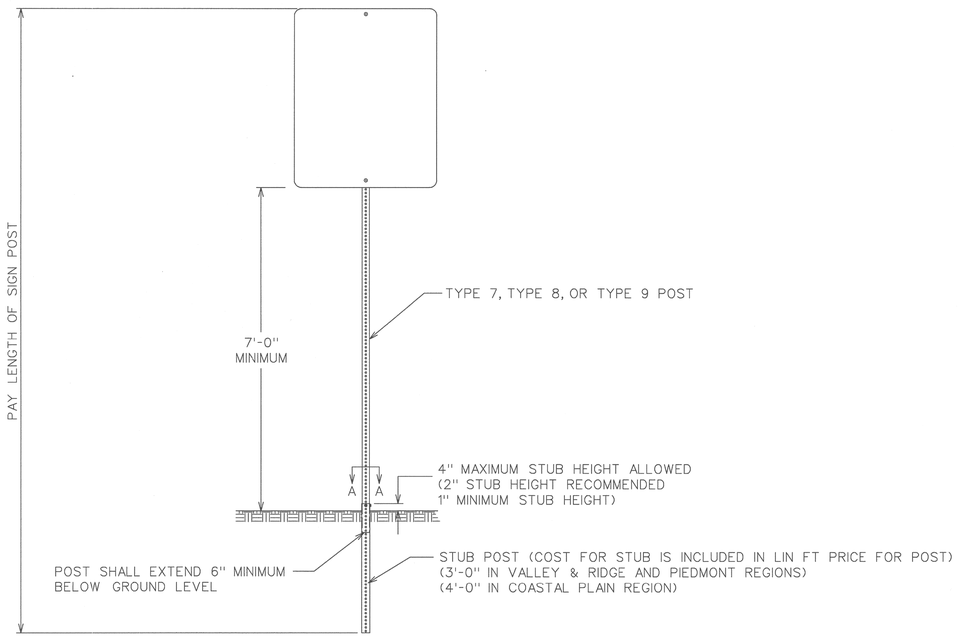
DETAILS FOR TYPICAL FRAMING

NO SCALE JANUARY 2000

PCBDTB

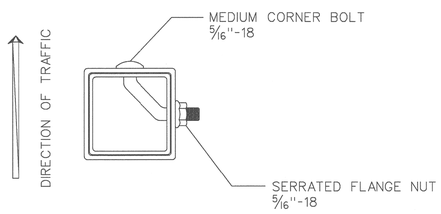
\Traffic\Framing.dgn Jan. 12, 2000 16:18:18

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	132	241



FRONT VIEW

POST	STUB SIZE
TYPE 7	2¼" x 2¼"
TYPE 8	2¾" x 2¾"
TYPE 9	2½" x 2½"



SECTION A-A

SIGN POST SELECTION CHART

70 MPH Wind Load Chart + 15% Gust Factor

	SLIP BASE NOT REQUIRED				GROUND MOUNTED BREAKAWAY SIGN SUPPORT REQUIRED				
	TYPE 7 2" 14 ga.		TYPE 9 2-1/4" 14 ga	TYPE 8 2-1/2" 12 ga.	TYPE 8 2-1/2" 12 ga.		TYPE 8 w/TYPE 9 Insert* 2-1/2" 12 ga. W/2-1/4" 14 ga.		
Sign Centroid	1 Post	2 Post	1 Post	1 Post	2 Post	3 Post	1 Post	2 Post	3 Post
	SQUARE FOOTAGE				SQUARE FOOTAGE				
6'	13.50	27.00	19.25	30.00	60.00	90.00	49.25	98.50	147.75
7'	11.60	23.20	16.50	25.75	51.50	77.25	42.25	84.50	126.75
8'	10.15	20.30	14.45	22.55	45.10	67.65	37.00	74.00	111.00
9'	9.00	18.00	12.85	20.00	40.00	60.00	32.85	65.70	98.55
10'	8.10	16.20	11.55	18.00	36.00	54.00	29.55	59.10	88.65
11'	7.40	14.80	10.50	16.40	32.80	49.20	26.90	53.80	80.70
12'	6.80	13.60	9.65	15.00	30.00	45.00	24.65	49.30	73.95
13'	6.25	12.50	8.90	13.85	27.70	41.55	22.75	45.50	68.25
14'	5.80	11.60	8.25	12.90	25.80	38.70	21.15	42.30	63.45
15'	5.00	10.00	6.45	10.10	20.20	30.30	16.55	33.10	49.65
16'	4.70	9.40	6.05	9.45	18.90	28.35	15.50	31.00	46.50
17'	4.40	8.80	5.70	8.90	17.80	26.70	14.60	29.20	43.80
18'	4.15	8.30	5.40	8.40	16.80	25.20	13.80	27.60	41.40
19'	3.95	7.90	5.10	7.95	15.90	23.85	13.05	26.10	39.15
20'	3.75	7.50	4.85	7.55	15.10	22.65	12.40	24.80	37.20

SIGN CENTROID IS DISTANCE FROM GROUND LEVEL TO BOTTOM OF SIGN *PLUS* HALF THE HEIGHT OF SIGN.
EXAMPLE: 24" X 48" SIGN THAT IS 7 FEET FROM GROUND TO BOTTOM OF SIGN. ADD HALF OF 48" (24" OR 2 FT) *PLUS* 7 FT. = 9' CENTROID.

SIGN PLATE SHALL NOT EXCEED 48" IN WIDTH ON A SINGLE POST.

* TYPE 9 INSERT SHALL BE A CONTINOUS POST INSERTED INTO THE TYPE 8 POST WHERE REQUIRED. THE INSERT POST SHALL EXTEND FROM THE BOTTOM OF THE SLIP BASE UPPER ASSEMBLY TO 4" BELOW THE BOTTOM OF THE SIGN. THE INSERT POST SHALL NOT EXTEND ABOVE THE BOTTOM OF THE SIGN. PAYMENT FOR THE INSERT POST SHALL BE PER LINEAR FOOT OF TYPE 9 POST.

GROUND MOUNTED BREAKAWAY SIGN SUPPORT WILL BE MEASURED AND PAID FOR SEPARATELY. THE COST FOR THIS WORK SHALL INCLUDE THE UPPER AND LOWER ASSEMBLY, STUB POST, CLASS "A" CONCRETE, ALL HARDWARE NECESSARY TO COMPLETE THE INSTALLATION, AND BE INCLUDED IN THE BID PRICE SUBMITTED FOR ITEM 636-3010.

DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

TYPE 7, 8, AND 9
SQUARE TUBE POST
INSTALLATION DETAIL

NO SCALE JULY 2002

PCBDT8

T-3A

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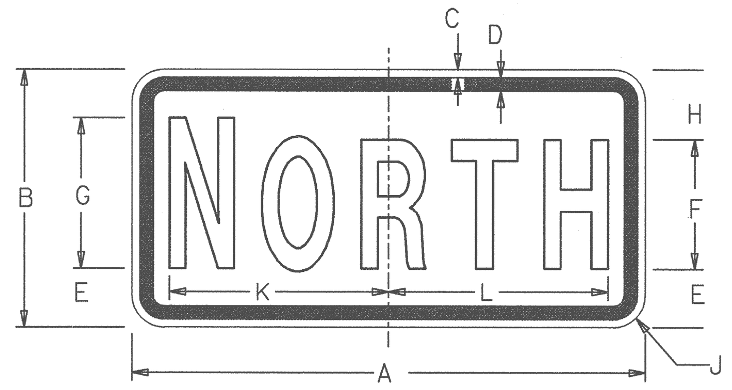
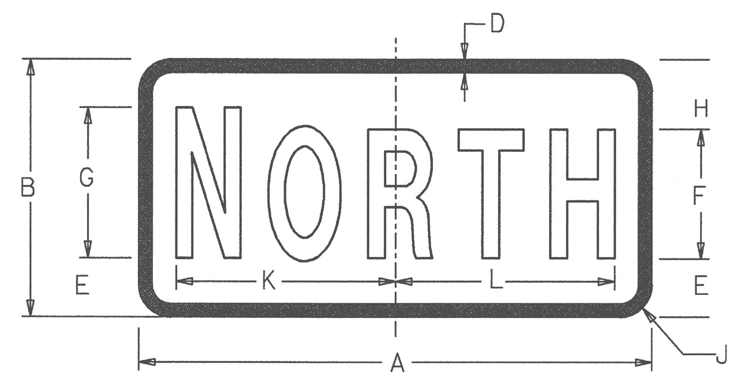
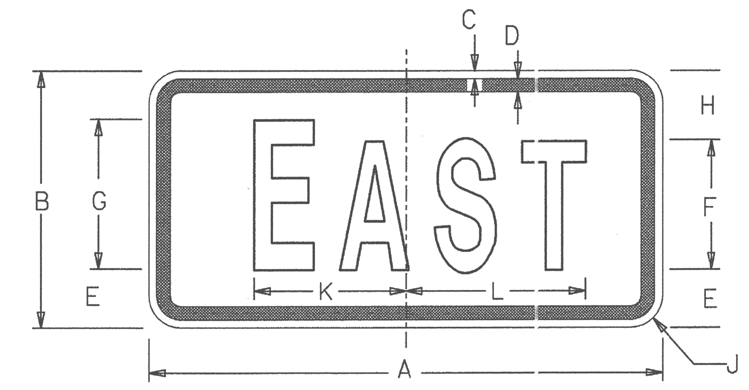
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	133	241



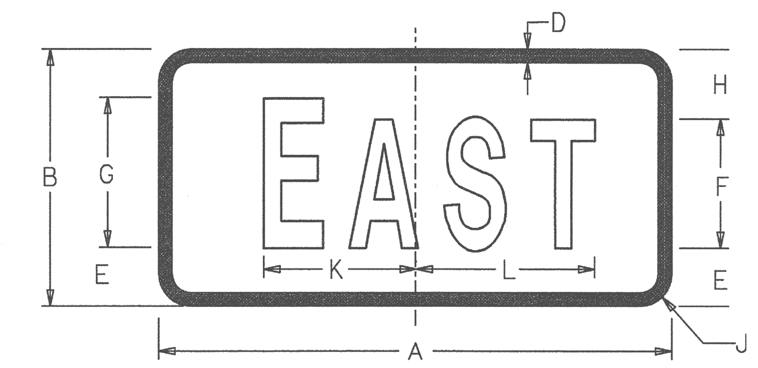
M3-1



MB3-1 & MG3-1



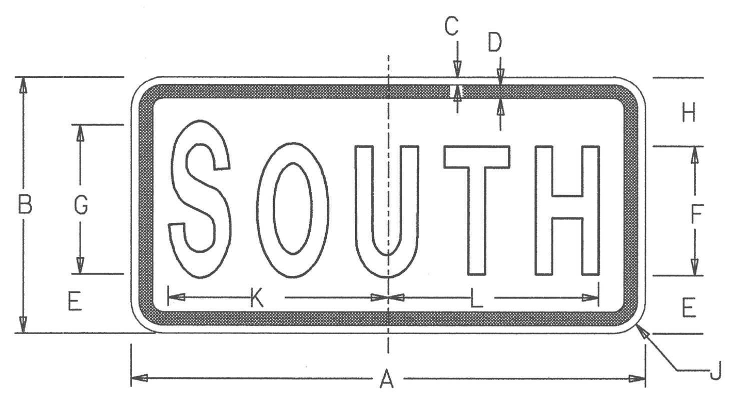
M3-2



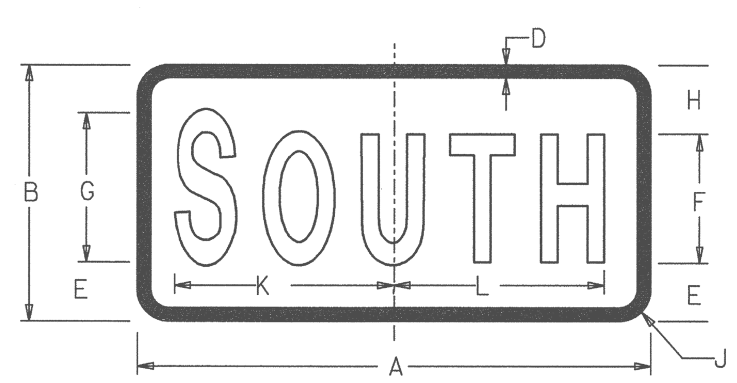
MB3-2 & MG3-2

DIMENSIONS (INCHES)											
SIGN	A	B	C	D	E	F	G	H	J	K	L
BIKE	12	4	-	¼	1	2D	2¼D	1	¾	4¼	4¼
MIN & STD	24	12	⅜	⅝	2¾	6C	7C	3¼	1½	10¼	10¼
SPECIAL	30	15	⅜	⅝	3¼	8C	9C	3¾	1½	12 11/16	12 11/16

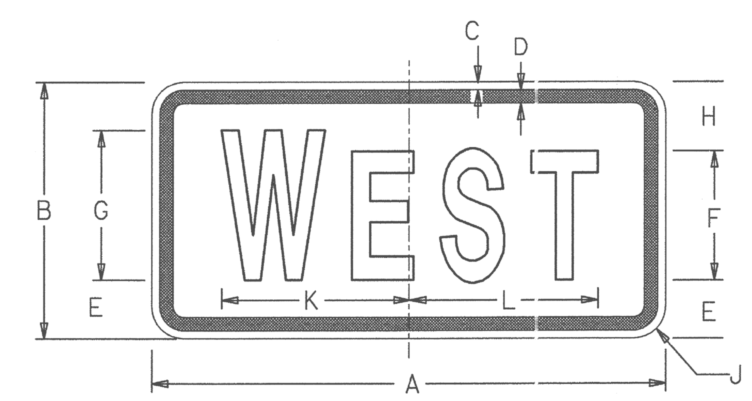
DIMENSIONS (INCHES)											
SIGN	A	B	C	D	E	F	G	H	J	K	L
BIKE	12	4	-	¼	1	2D	2¼D	1	¾	3⅜	3⅜
MIN & STD	24	12	⅜	⅝	2¾	6C	7C	3¼	1½	7⅞	8¾
SPECIAL	30	15	⅜	⅝	3¼	8C	9C	3¾	1½	10⅜	11⅛



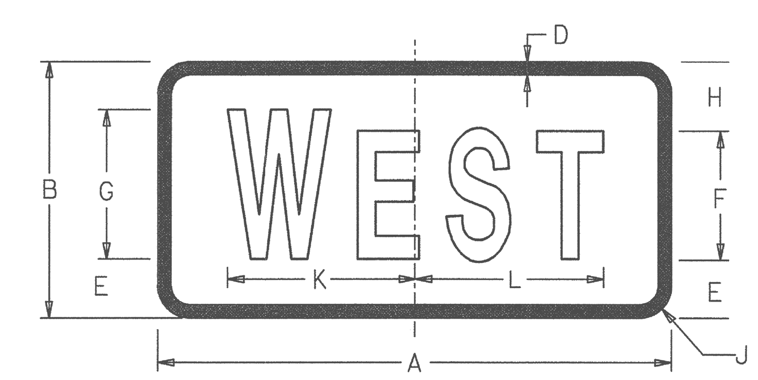
M3-3



MB3-3 & MG3-3



M3-4



MB3-4 & MG3-4

DIMENSIONS (INCHES)											
SIGN	A	B	C	D	E	F	G	H	J	K	L
BIKE	12	4	-	¼	1	2D	2¼D	1	¾	4¼	4¼
MIN & STD	24	12	⅜	⅝	2¾	6C	7C	3¼	1½	10¼	9 11/16
SPECIAL	30	15	⅜	⅝	3¼	8C	9C	3¾	1½	12 11/16	12½

DIMENSIONS (INCHES)											
SIGN	A	B	C	D	E	F	G	H	J	K	L
BIKE	12	4	-	¼	1	2D	2¼D	1	¾	3½	3½
MIN & STD	24	12	⅜	⅝	2¾	6C	7C	3¼	1½	8¾	8¾
SPECIAL	30	15	⅜	⅝	3¼	8C	9C	3¾	1½	10⅜	11⅛

GENERAL NOTES:

1. M3 (CONVENTIONAL ROADWAYS) SIGNS SHALL HAVE BLACK LEGENDS AND BORDERS ON WHITE REFLECTORIZED BACKGROUNDS.
2. MB3 (INTERSTATE HIGHWAYS) SIGNS SHALL HAVE WHITE REFLECTORIZED LEGENDS AND BORDERS ON BLUE REFLECTORIZED BACKGROUNDS.
3. MG3 (BIKE LANES) SIGNS SHALL HAVE WHITE REFLECTORIZED LEGENDS AND BORDERS ON GREEN REFLECTORIZED BACKGROUNDS.

DATE	REVISIONS

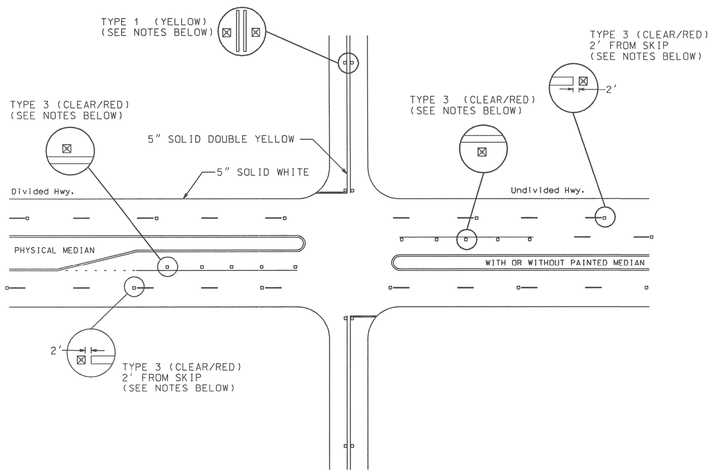
GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

DETAILS OF
CARDINAL DIRECTION SIGNS

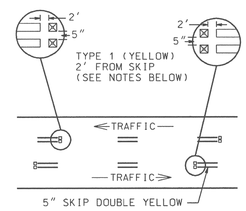
NO SCALE JANUARY 2000

...\t04cardinal direction signs.dg Jul. 03, 2003 16:10:12

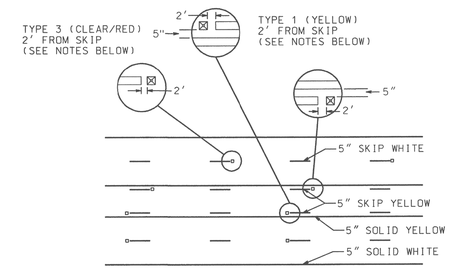
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	134	241



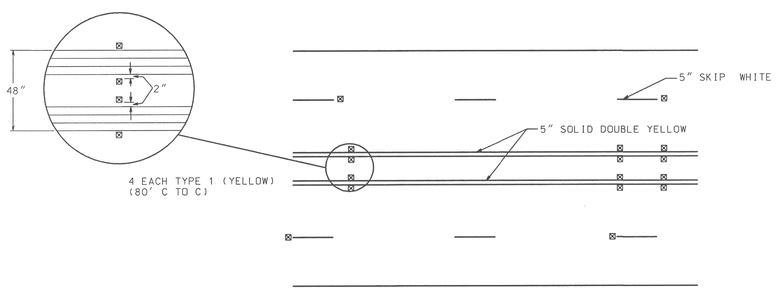
DIVIDED / UNDIVIDED HIGHWAY



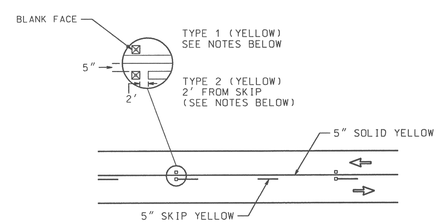
REVERSIBLE LANE



TWO WAY LEFT TURN LANE



4'-0" STRIPED FLUSH MEDIAN



NO PASSING ZONE

GENERAL NOTES:

1. RAISED PAVEMENT MARKERS SHALL BE SPACED EVERY 80 FT UNLESS OTHERWISE SPECIFIED.
2. ON SOLID WHITE TURN BAY LINES, SPACING SHALL BE 20 FT.
3. RAISED PAVEMENT MARKERS SHALL BE OFFSET 5 INCHES FROM SOLID LANE LINES.
4. CLEAR FACE OF TYPE 3 RAISED PAVEMENT MARKERS SHALL BE ORIENTED TOWARD ONCOMING TRAFFIC.
5. ON HORIZONTAL CURVES WHERE AT LEAST 3 MARKERS CANNOT BE SEEN AT ONE TIME USING NORMAL SPACING, MARKERS SHALL BE PLACED 40 FT.

DATE	REVISIONS
9-4-03	NO PASSING ZONE RPM's
1-13-04	NO PASSING ZONE RPM's

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

DETAILS OF
RAISED PAVEMENT MARKER LOCATION
NON-LIMITED ACCESS ROADWAY
NO SCALE JANUARY 2000

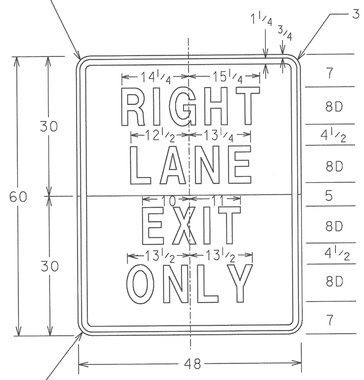
T-15A

PCBDTB

C:\Stage location ver 1.a.dgn Jan 13, 2004 13:15:00

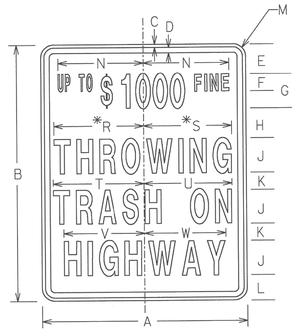
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	135	241

BLACK LEGEND AND BORDER ON WHITE REFLECTORIZED BACKGROUND



R553-7

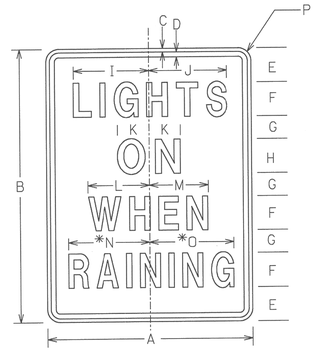
BLACK LEGEND AND BORDER ON YELLOW REFLECTORIZED BACKGROUND



R553-1

* REDUCE SPACING 20%

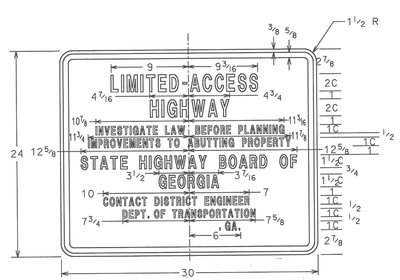
SIGN	DIMENSIONS (INCHES)																	
	A	B	C	D	E	F	G	H	J	K	L	M	N	R	S	T	U	V	W
STD & MIN	24	30	3/8	5/8	3 1/2	2B	4C	3 1/2	4C	2	3	1 1/2	10	10 1/2	10 1/4	10 3/4	10 1/8	9 3/8	9 1/2
EXPWY	36	48	5/8	7/8	6	3B	6C	6	6C	3	6	2 1/4	15	15 3/4	15 3/8	16 1/8	15 3/8	14 1/16	14 1/4
FWY	48	60	3/4	1 1/4	7	4B	7C	8	8C	4	6	3	20	21	20 1/2	21 1/2	20 1/4	18 3/4	19



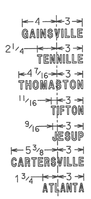
R554-1

* REDUCE SPACING 30%

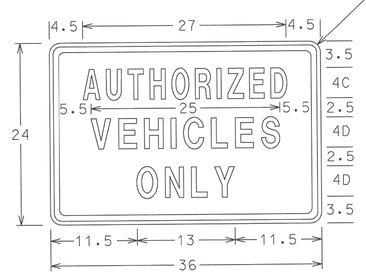
SIGN	DIMENSIONS (INCHES)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
STD & MIN	24	30	3/8	5/8	3 5/8	4D	2 1/4	4E	8 3/4	9 1/4	4	6 3/4	7 1/4	9 1/4	9 3/4	1 1/2
EXPWY	36	48	5/8	7/8	6	6D	4	6E	13 1/4	13 3/4	5 1/2	10 3/4	10 1/4	14 1/4	14 3/4	2 1/4
FWY	48	60	3/4	1 1/4	7 1/4	8D	4 1/2	8E	17 1/8	17 7/8	7	14 3/8	13 5/8	18 5/8	19 3/8	3



R552-1



1/2 MARGIN
3/4 BORDER
1 1/2 RADIUS



R552-2

DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

DETAILS OF
REGULATORY SIGNS
SHEET 2 OF 2

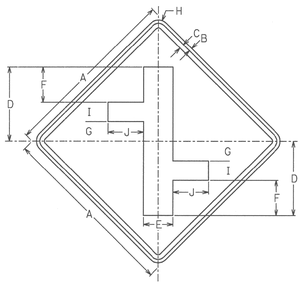
NO SCALE JANUARY 2000

T-5B

PCBDTB

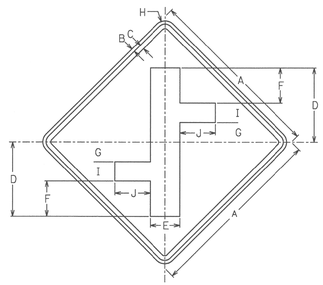
\\GDOTregulatory signs 5 of 7.dgn Jan 03, 2000 10:10:13

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	136	241



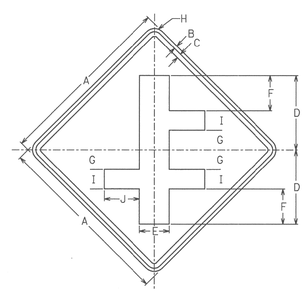
W552-1

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1/2	3/4	12 1/2	5	6	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



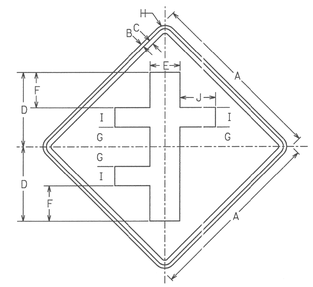
W552-2

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1/2	3/4	12 1/2	5	6	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



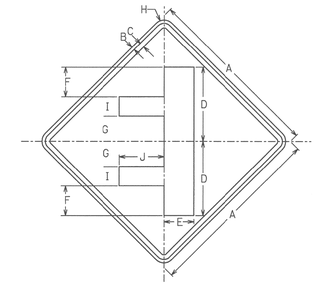
W552-3

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1/2	3/4	12 1/2	5	6	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



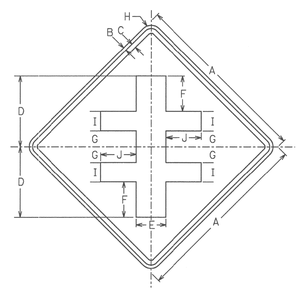
W552-4

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1/2	3/4	12 1/2	5	6	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



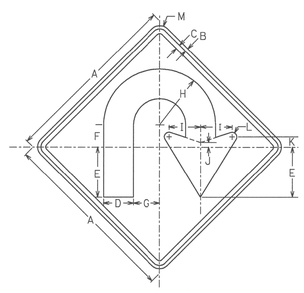
W552-5

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1/2	3/4	12 1/2	5	5	4 1/4	1 7/8	3 1/4	8
EXPWY	36	5/8	7/8	15	6	6	5	2 1/4	4	10
FWY	48	7/8	1 1/4	20	8	8	6 3/4	3	5 1/4	12



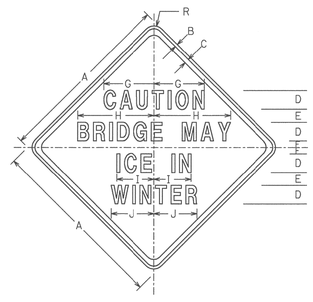
W552-6

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1/2	3/4	12 1/2	5	5	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



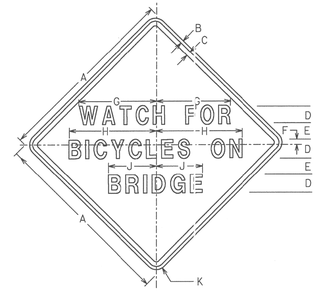
W551-1

SIGN	DIMENSIONS (INCHES)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
STD & MIN	30	1/2	3/4	5	8 1/2	33/4	4 3/8	9 3/8	5 3/4	3/4	1 5/8	3/4	1 7/8
EXPWY	36	5/8	7/8	6	10	4 1/2	5 1/4	11 1/4	6 7/8	15/16	2 3/16	15/16	2 1/4
FWY	48	7/8	1 1/4	8	13 1/2	6	7	15	8 7/16	1 1/4	2 3/4	1 1/4	3



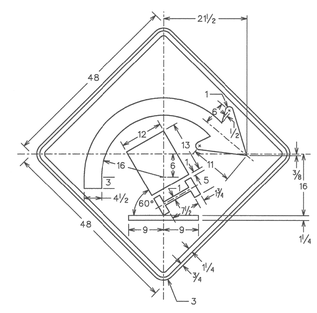
W560-1

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J	R
MIN & STD	30	1/2	3/4	3D	2 3/16	1 3/32	8	12 1/2	6	7	1 7/8
EXPWY	36	5/8	7/8	4D	2 5/8	1 5/16	11	16 1/2	8	9	2 1/4
FWY	48	3/4	1 1/4	5D	3 1/2	1 3/4	13 1/2	20 1/2	10	11 1/2	3



W560-2

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
MIN & STD	30	1/2	3/4	3C	1 1/2	1 3/32	9 1/2	11 1/2	6	1 7/8
EXPWY	36	5/8	7/8	4C	3 1/4	2	13	15	7 1/2	2 1/4



W560-3

SIGNS SHALL HAVE YELLOW REFLECTORIZED BACKGROUNDS WITH BLACK LEGENDS, BORDERS, AND SYMBOLS.

DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

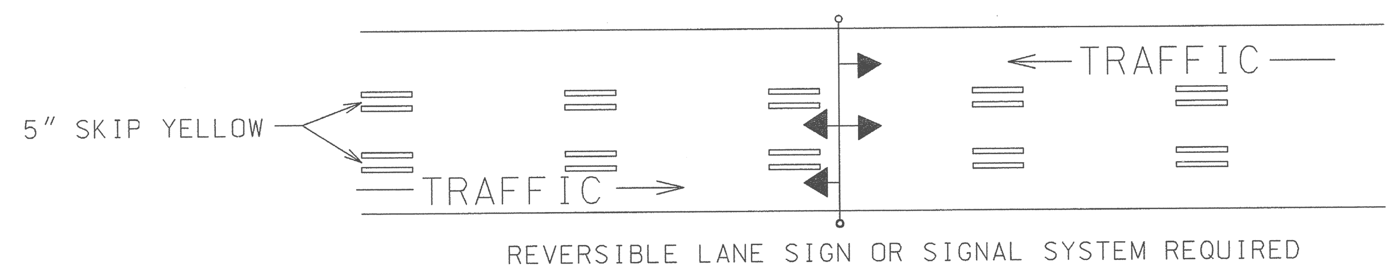
DETAILS OF WARNING SIGNS

NO SCALE JANUARY 2000

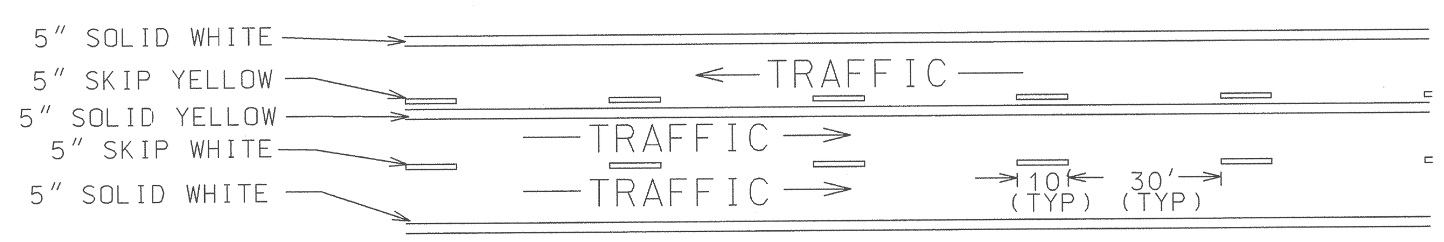
PCBDTB

\\tfdwarning signs dgn Jul 03, 2003 16:12:13

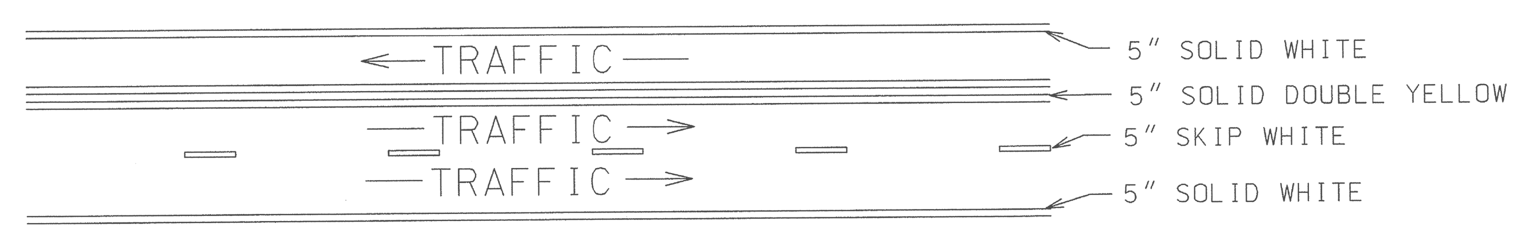
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	137	241



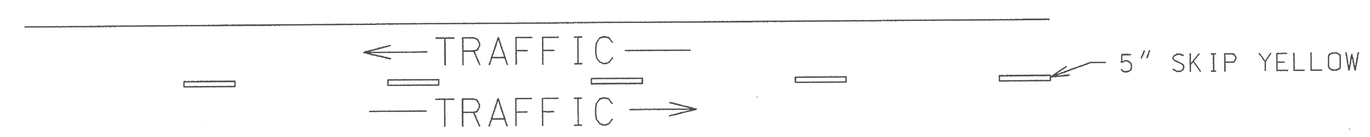
TWO-WAY TRAFFIC WITH A REVERSIBLE CENTER LANE



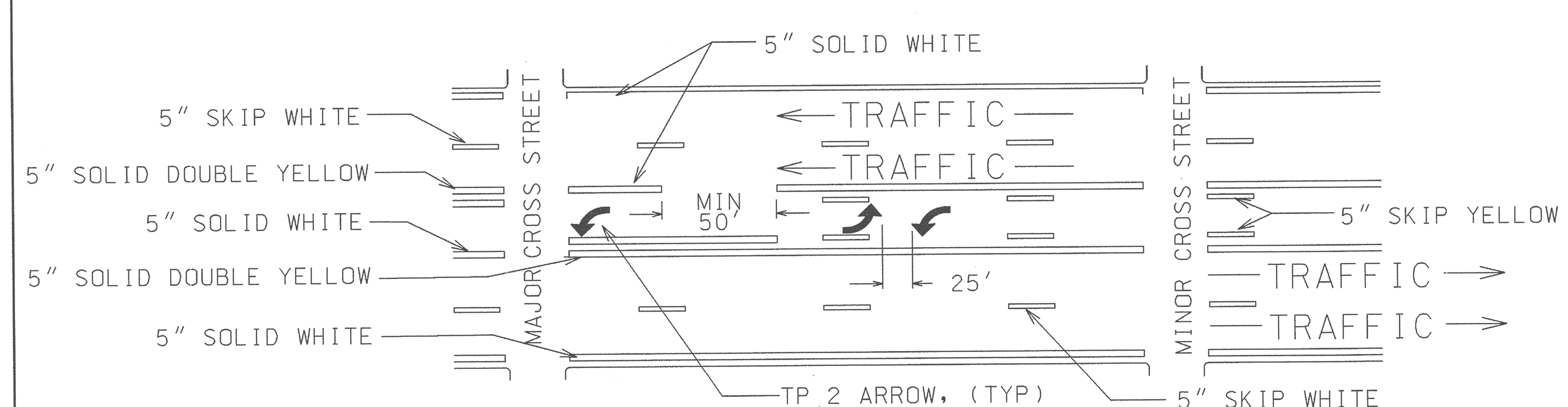
TWO-WAY TRAFFIC WHERE MOTORISTS IN A SINGLE LANE ARE PERMITTED TO PASS



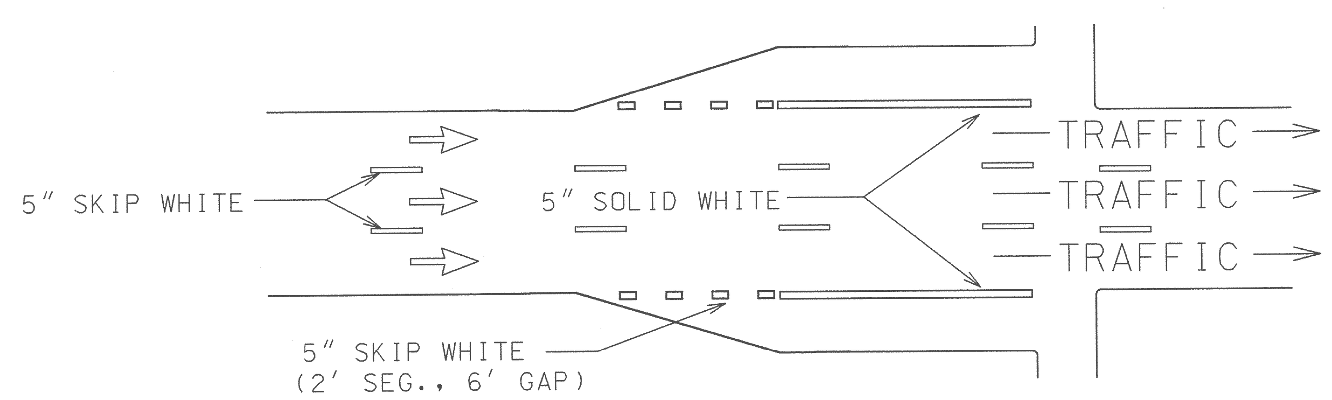
TWO-WAY TRAFFIC WHERE MOTORISTS IN A SINGLE LANE ARE NOT PERMITTED TO PASS



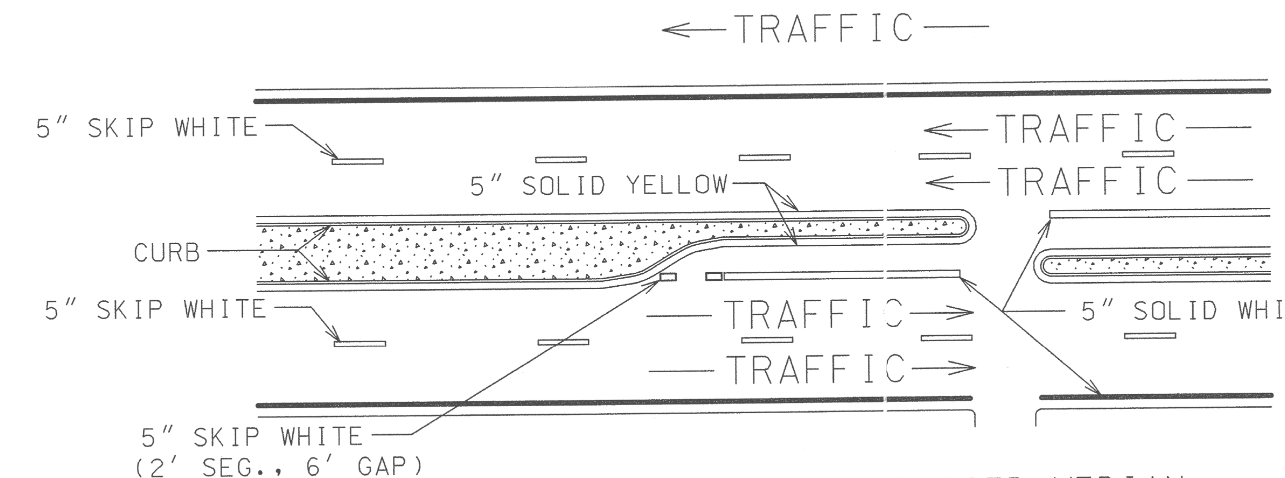
TWO-LANE, TWO-WAY TRAFFIC WITH PASSING PERMITTED



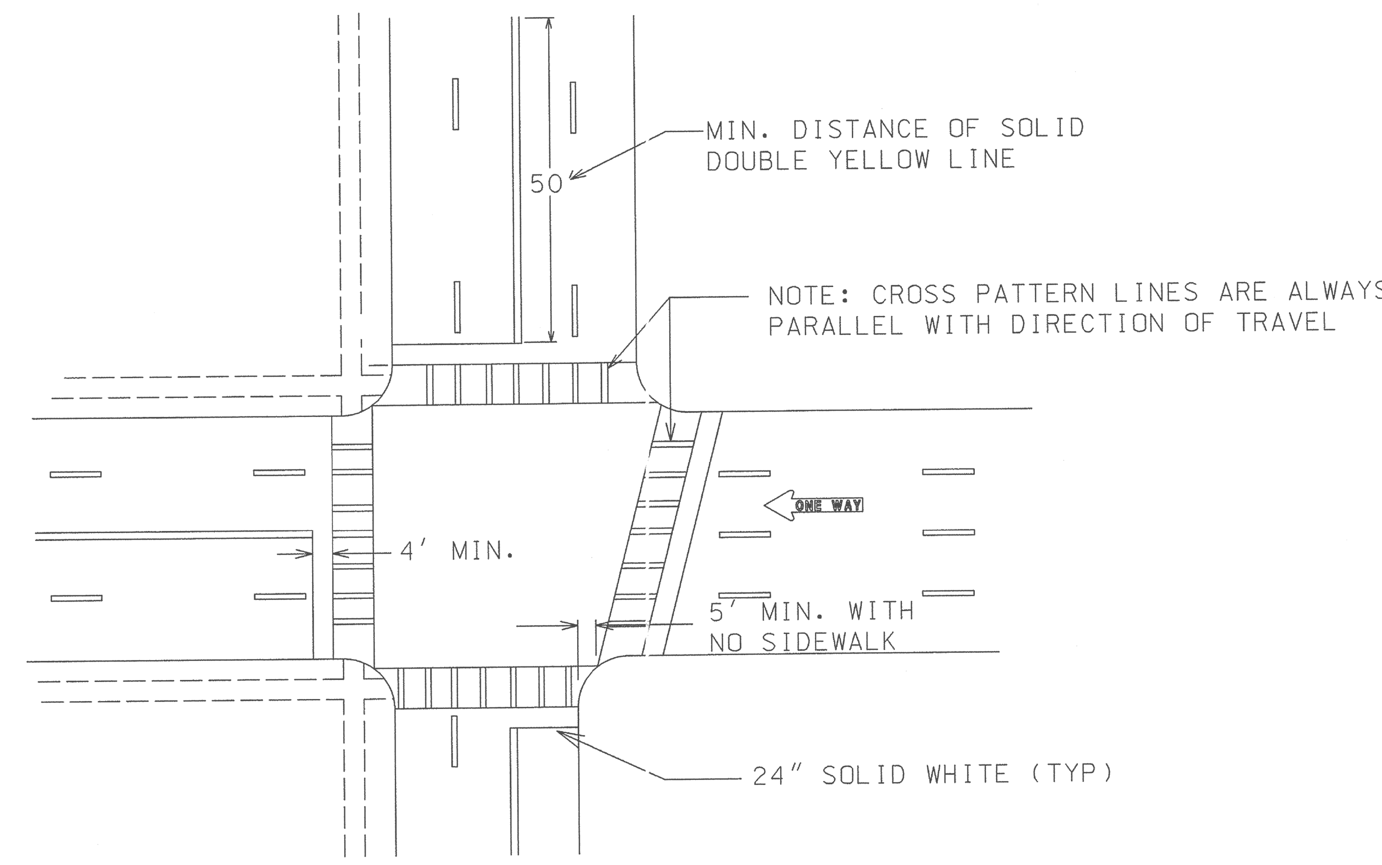
MULTI-LANE, TWO-WAY TRAFFIC WITH SINGLE LANE, TWO-WAY LEFT TURN CHANNELIZATION



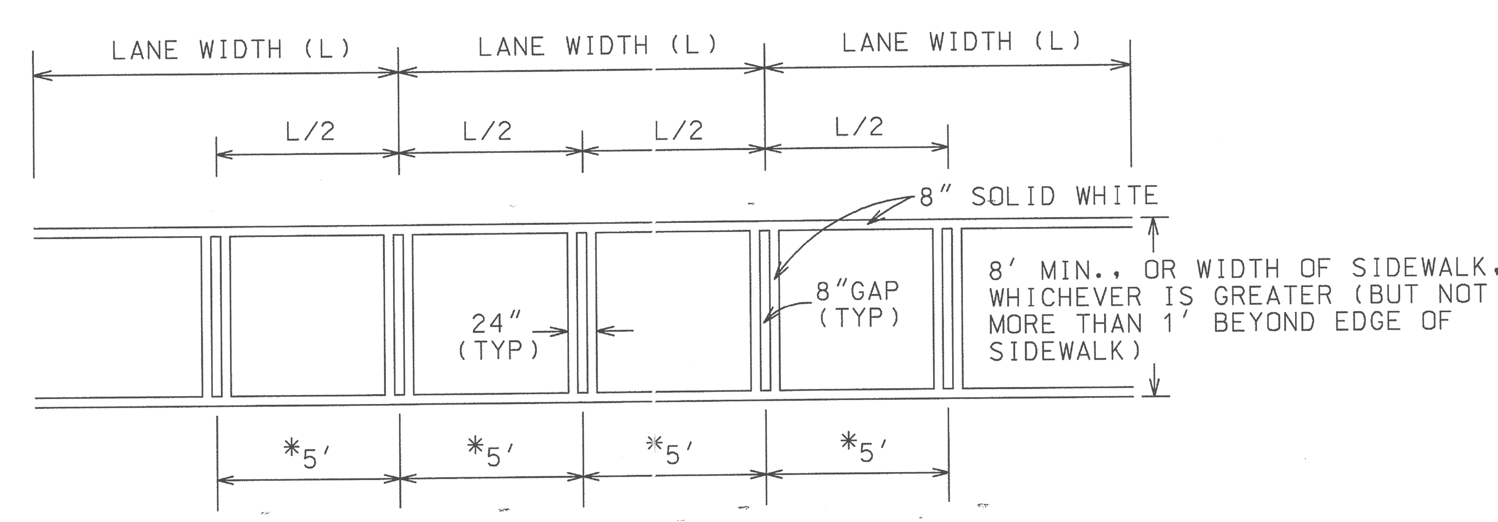
ONE-WAY TRAFFIC WITH ADDED TURN LANES



DIVIDED HIGHWAY WITH RAISED MEDIAN



TYPICAL LOCATION OF CROSSWALKS AND STOP BARS



*USE WHERE THE LANE WIDTH EXCEEDS 12'
OR WHERE LANE LINES HAVE BEEN OMITTED

CROSSWALK DETAIL

GENERAL NOTES:

1. SPACING BETWEEEN DOUBLE LINES SHALL BE EQUAL TO THE LINE WIDTH.
2. EDGE LINES SHALL BE PLACED A MINIMUM OF 4 INCHES FROM THE NORMAL EDGE OF PAVEMENT.

DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF PAVEMENT MARKING PLACEMENT NON-LIMITED ACCESS ROADWAY
		NO SCALE JANUARY 2000

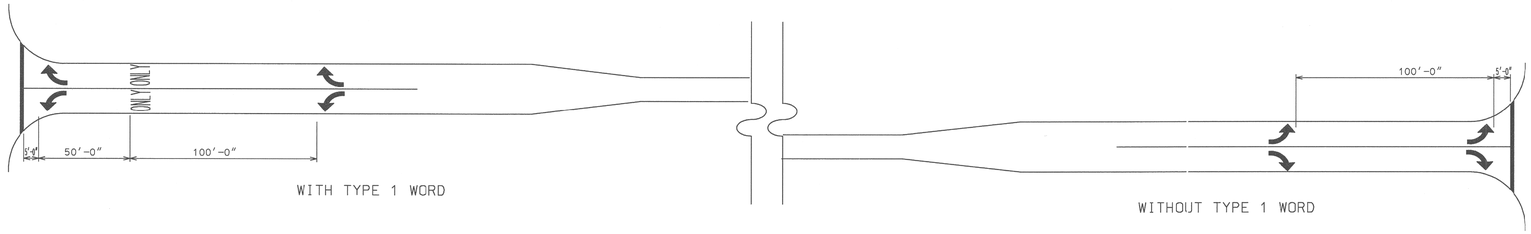
T-11A

PCBDTB

...\t11apvmt marking non l a.dgn Jul. 03, 2003 16:10:15

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	138	241

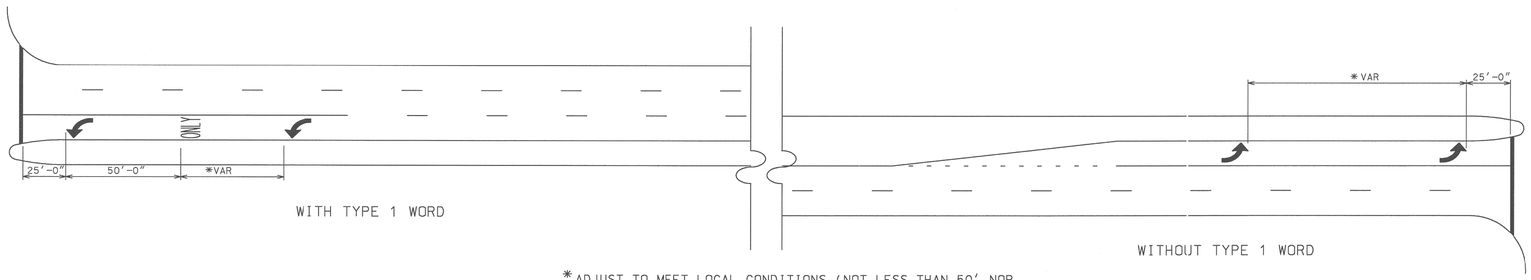
EXIT RAMPS



WITH TYPE 1 WORD

WITHOUT TYPE 1 WORD

SHORT TURN LANES

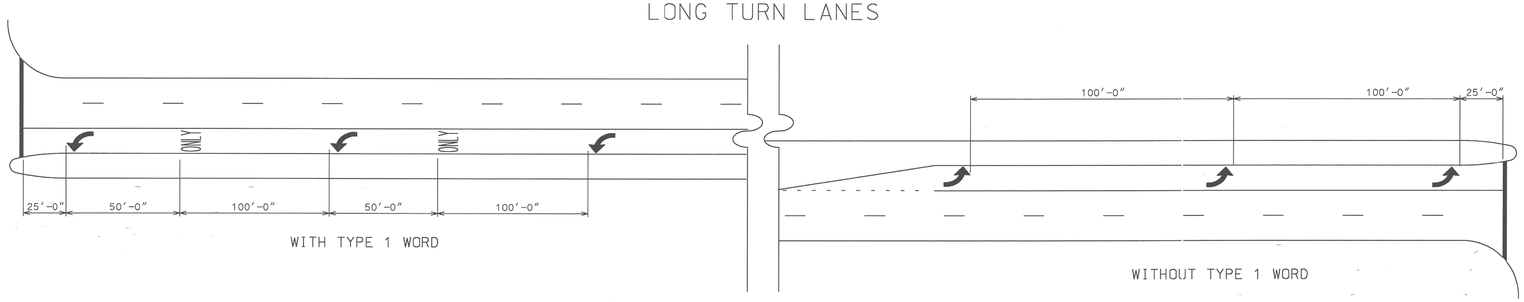


WITH TYPE 1 WORD

WITHOUT TYPE 1 WORD

*ADJUST TO MEET LOCAL CONDITIONS (NOT LESS THAN 50' NOR MORE THAN 100')

LONG TURN LANES



WITH TYPE 1 WORD

WITHOUT TYPE 1 WORD

GENERAL NOTES:

1. SPACING OF TYPE 2 ARROW IS REPRESENTATIVE OF SPACING FOR TYPE 1, TYPE 3, TYPE 4, & TYPE 5 ARROWS.
2. ALL TURNING LANES SHALL HAVE A MINIMUM OF 2 ARROWS.
3. GROUND MOUNTED OR OVERHEAD SIGNING SHALL BE SUPPLEMENTED BY TYPE 1 WORD.

DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

DETAILS OF PAVEMENT MARKING ARROW LOCATION

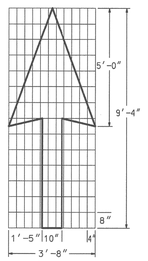
NO SCALE JANUARY 2000

PCBOTB

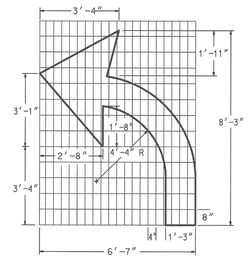
T-12A

...\12arrow location.dgn JUL 03, 2003 16:10:15

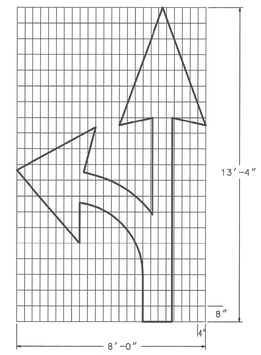
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
G.A.	CSHPP-0007-00(310)	139	241



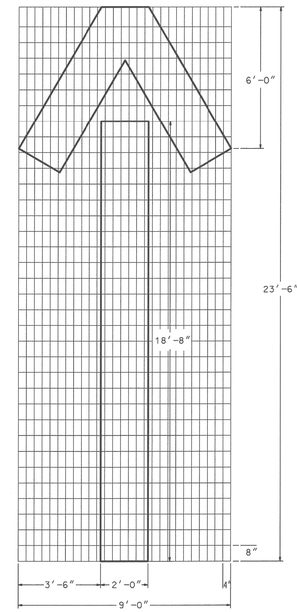
PAVEMENT MARKING, ARROW, TYPE 1
WHITE
(12.0 SQ. FT.)



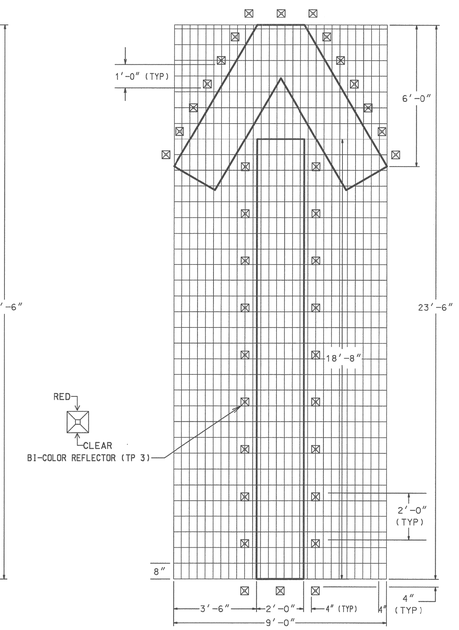
PAVEMENT MARKING, ARROW, TYPE 2
WHITE
(16.0 SQ. FT.)



PAVEMENT MARKING, ARROW, TYPE 3
WHITE
(28.5 SQ. FT.)

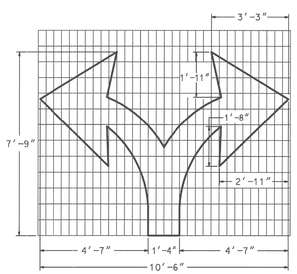


PAVEMENT MARKING, ARROW, TYPE 4
WHITE
(64.5 SQ. FT.)

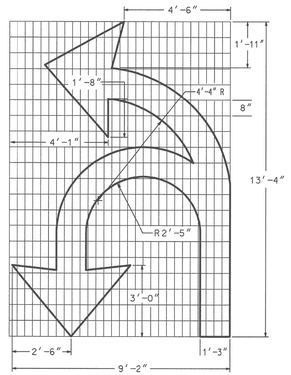


PAVEMENT MARKING, ARROW, WRONG WAY
WHITE
(64.5 SQ. FT.)

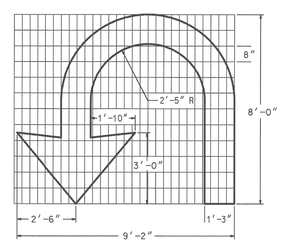
ARROW- WHITE REFLECTORIZED PAINT THERMOPLASTIC, AS SPECIFIED BY GEORGIA STANDARD SPECIFICATIONS, SECTION 655.



PAVEMENT MARKING, ARROW, TYPE 5
WHITE
(25.5 SQ. FT.)



PAVEMENT MARKING, ARROW, TYPE 6
WHITE
(42.0 SQ. FT.)



PAVEMENT MARKING, ARROW, TYPE 7
WHITE
(26.0 SQ. FT.)

DATE	REVISIONS
4-11-00	CHANGED LOCATION OF RPMs ON WRONG WAY ARROW

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

DETAILS OF
PAVEMENT MARKINGS-ARROWS

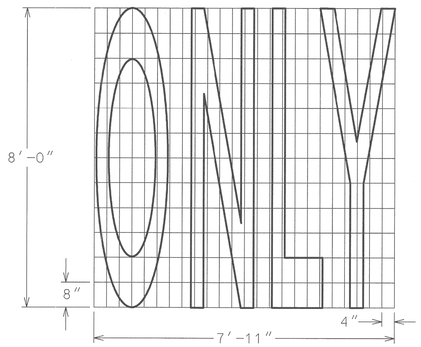
NO SCALE JANUARY 2000

PCBDTB

T-12B

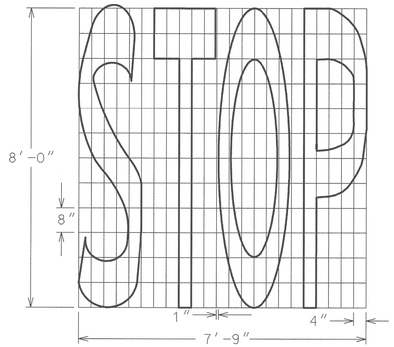
\\T12Barrow Wed Jul 03, 2013 18:18:18

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	140	241



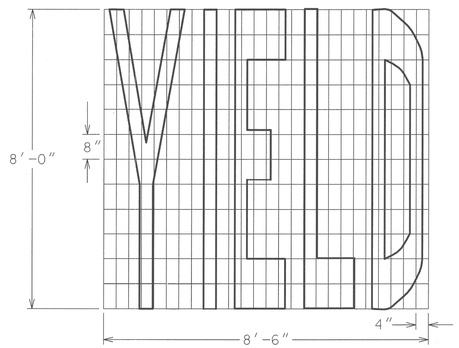
TYPE 1

AREA = 20.8 FT^2



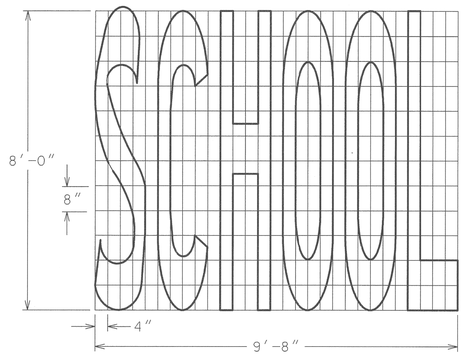
TYPE 2

AREA = 25.4 FT^2



TYPE 15

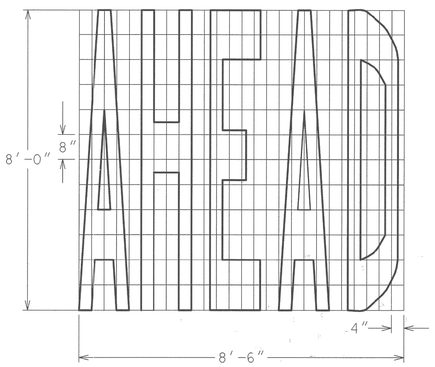
AREA = 25.4 FT^2



TYPE 3A

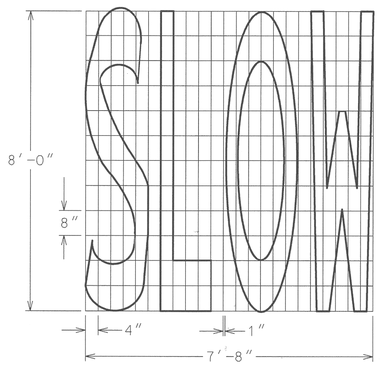
(SINGLE LANE)

AREA = 33.5 FT^2



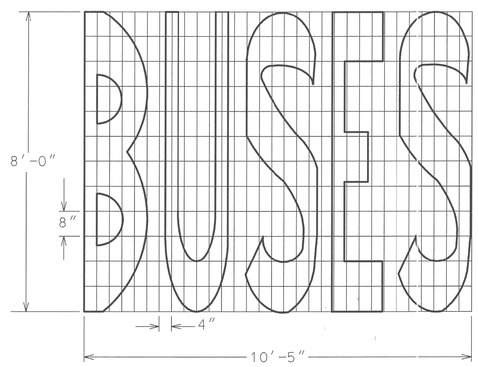
TYPE 4

AREA = 29.1 FT^2



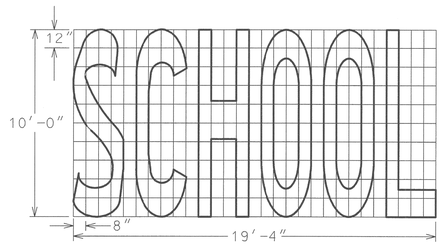
TYPE 5

AREA = 25.4 FT^2



TYPE 6

AREA = 38.1 FT^2



TYPE 3B

(TWO LANES)

AREA = 85.0 FT^2

DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION

OFFICE OF TRAFFIC SAFETY & DESIGN

DETAILS OF

PAVEMENT MARKING WORDS

SHEET 1 OF 2

NO SCALE JANUARY 2000

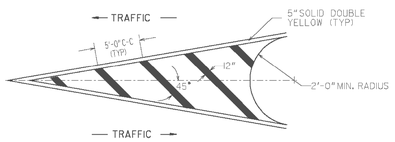
PCBOTB

T-13A

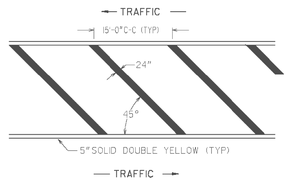
\13Sheets 1 of 2.dgn Jul 03, 2003 16:10:16

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	CSHPP-0007-00(310)	141	241

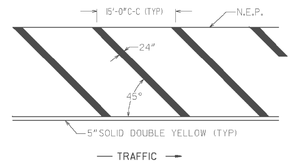
DETAIL "A" (YELLOW)



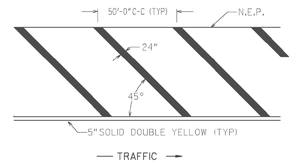
DETAIL "B" (YELLOW)



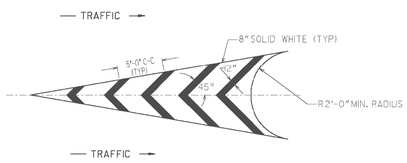
DETAIL "C" (YELLOW)



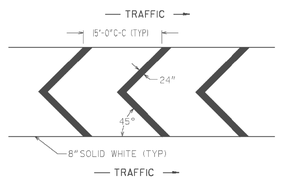
DETAIL "D" (YELLOW)



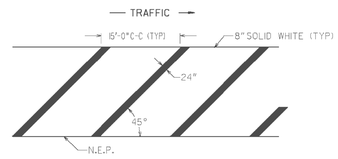
DETAIL "A" (WHITE)



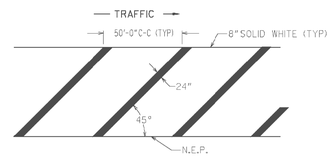
DETAIL "B" (WHITE)



DETAIL "C" (WHITE)



DETAIL "D" (WHITE)



GENERAL NOTES:

1. FOR YELLOW STRIPING, THE SQUARE YARDS SHOWN ON PLAN, SUMMARY AND DETAILED ESTIMATE SHEETS INCLUDE THE AREA WITHIN THE BORDERS AND THE 5" SOLID DOUBLE YELLOW BORDER.
2. FOR WHITE STRIPING, THE SQUARE YARDS SHOWN ON PLAN, SUMMARY AND DETAILED ESTIMATE SHEETS INCLUDES THE AREA WITHIN THE BORDERS AS WELL AS THE 8" SOLID WHITE BORDER.

GEORGIA
DEPARTMENT OF TRANSPORTATION

- NO SCALE -

DATE	REVISIONS
6/25/04	Modified general note 1
1/18/05	CHANGED BORDER
11/21/08	Modified general note 1

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: TRAFFIC OPERATIONS
SIGNING AND MARKING PLANS

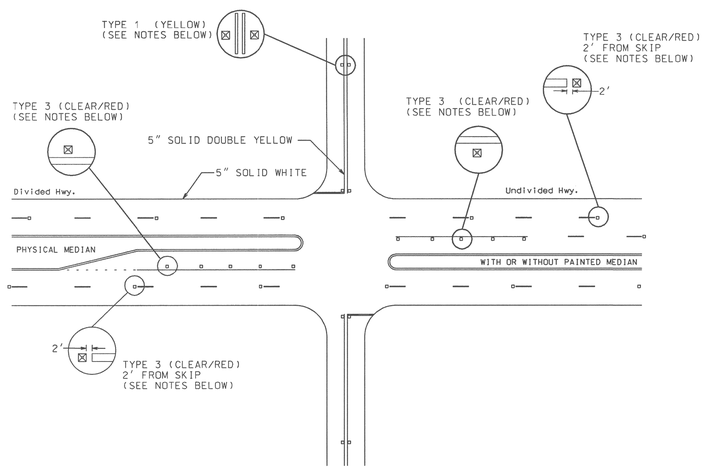
T-14

DETAIL OF PAVEMENT MARKING HATCHING
JANUARY 2000

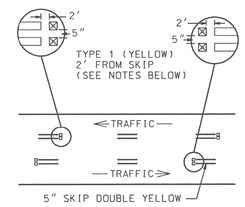
NUMBER T -14

...01\HWOCHWG.DGN 12/11/2009 1:21:18 PM jselden

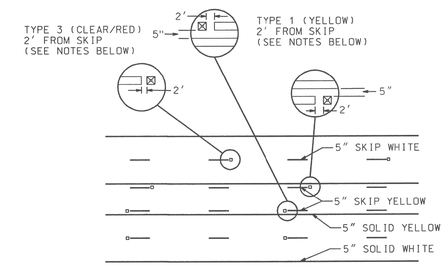
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	142	241



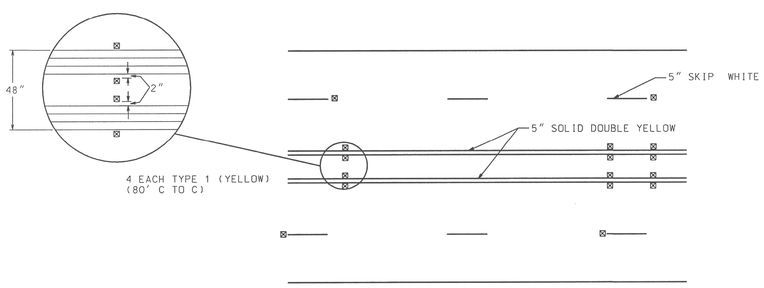
DIVIDED / UNDIVIDED HIGHWAY



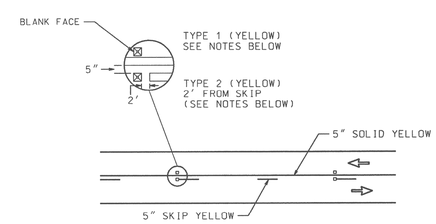
REVERSIBLE LANE



TWO WAY LEFT TURN LANE



4'-0" STRIPED FLUSH MEDIAN



NO PASSING ZONE

GENERAL NOTES:

1. RAISED PAVEMENT MARKERS SHALL BE SPACED EVERY 80 FT UNLESS OTHERWISE SPECIFIED.
2. ON SOLID WHITE TURN BAY LINES, SPACING SHALL BE 20 FT.
3. RAISED PAVEMENT MARKERS SHALL BE OFFSET 5 INCHES FROM SOLID LANE LINES.
4. CLEAR FACE OF TYPE 3 RAISED PAVEMENT MARKERS SHALL BE ORIENTED TOWARD ONCOMING TRAFFIC.
5. ON HORIZONTAL CURVES WHERE AT LEAST 3 MARKERS CANNOT BE SEEN AT ONE TIME USING NORMAL SPACING, MARKERS SHALL BE PLACED 40 FT.

DATE	REVISIONS
9-4-03	NO PASSING ZONE RPM's
1-13-04	NO PASSING ZONE RPM's

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

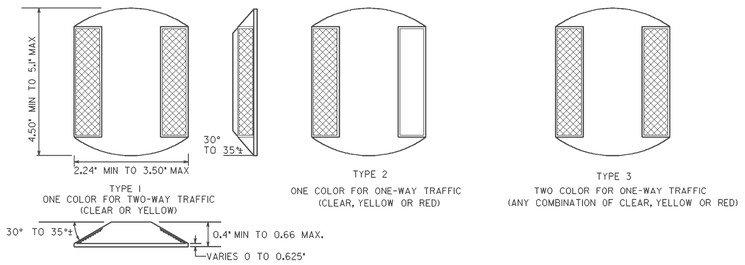
DETAILS OF
RAISED PAVEMENT MARKER LOCATION
NON-LIMITED ACCESS ROADWAY
NO SCALE JANUARY 2000

PCBDTB

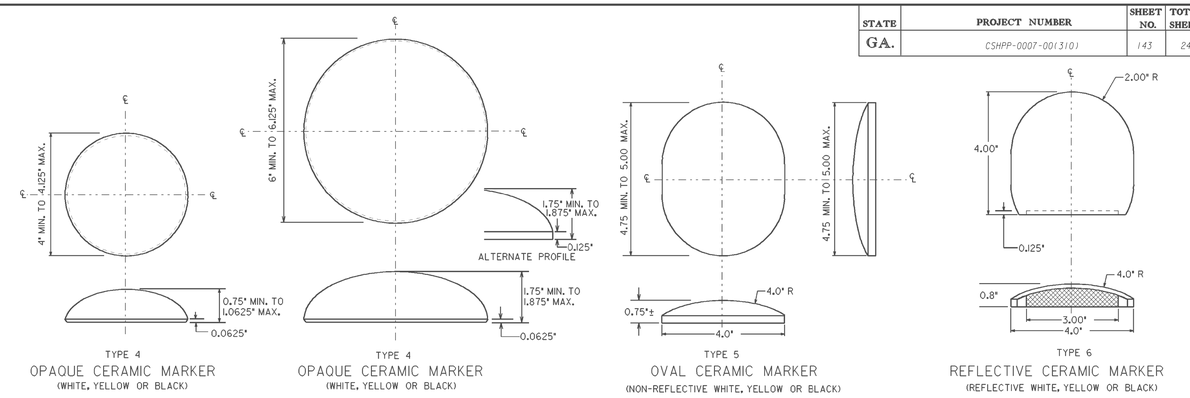
T-15A

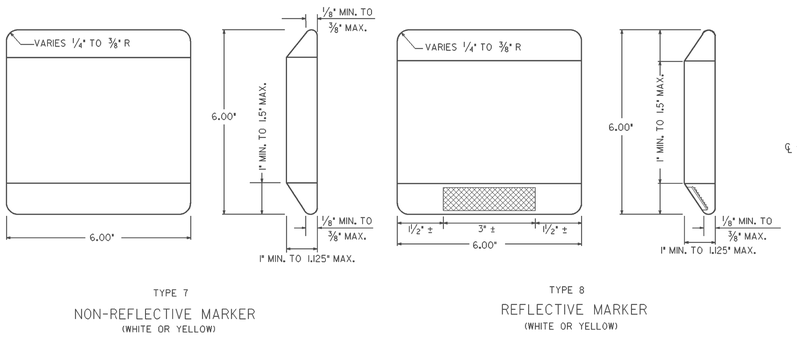
\\tsdgrpm\Violation\ms i & dgn Jan 13, 2004 13:05:00

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	143	241

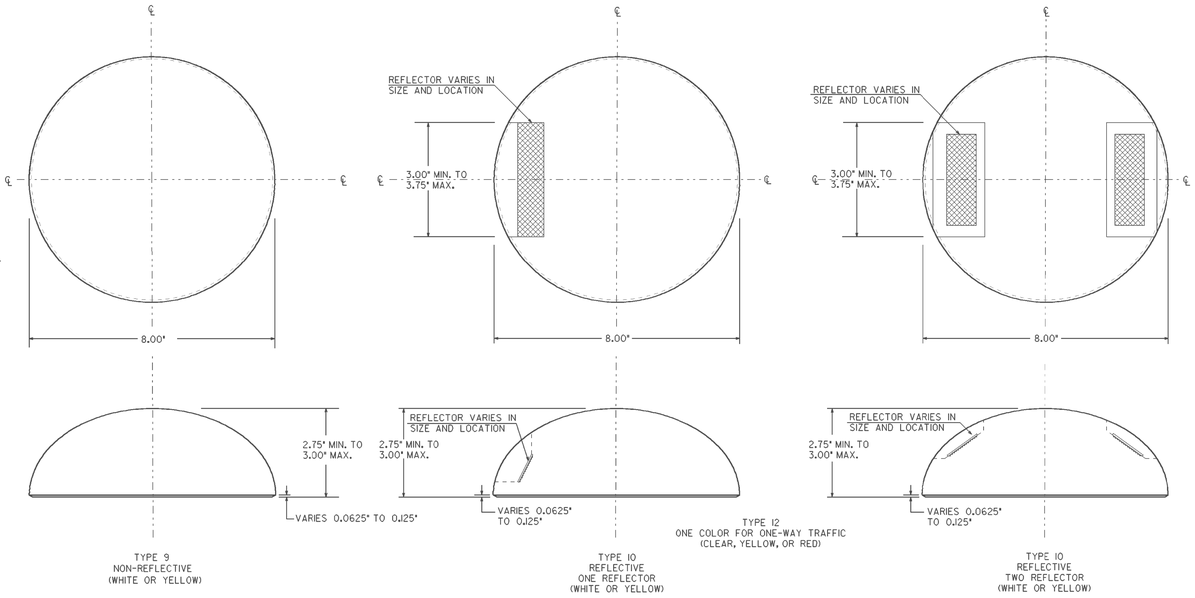


RAISED REFLECTIVE MARKERS

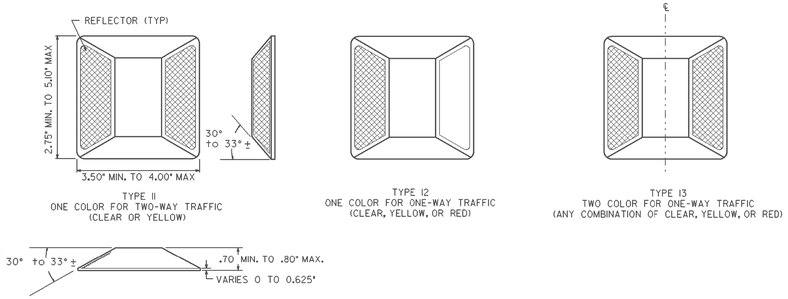




CERAMIC JIGGLE BAR MARKER



CERAMIC CHANNEL MARKER



ALTERNATE RAISED REFLECTIVE MARKERS

GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, AND SUPPLEMENTS THERE TO.
2. THE CONTRACTOR SHALL USE RAISED PAVEMNT MAKER SOURCES AS LISTED IN OPL 76.
3. COLORS FOR REFLECTIVE ELEMENTS SHALL BE EITHER CLEAR, YELLOW, OR RED AS SPECIFIED.
4. THE SHELL OF THE REFLECTIVE MARKERS SHALL BE OF ONE COLOR OR OF A COMBINATION OF TWO COLORS, WHICH SHALL BE THE SAME AS THE REFLECTIVE ELEMENT.
5. THE SURFACE OF OPAQUE CERAMIC MARKERS SHALL BE GLAZED AND OF THE COLOR SPECIFIED IN THE PLANS WITH A WHITE, VITREOUS, CERAMIC BASE.
6. COLORS FOR ALL RAISED PAVEMENT MARKERS SHALL BE AS SPECIFIED IN THE PLANS.

DATE	REVISIONS
9-22-11	REV. DIMENSIONS, ADDED
	NOTES TO MARKERS
	AND REV. GEN. NOTES.

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

DETAILS OF
RAISED PAVEMENT MARKERS

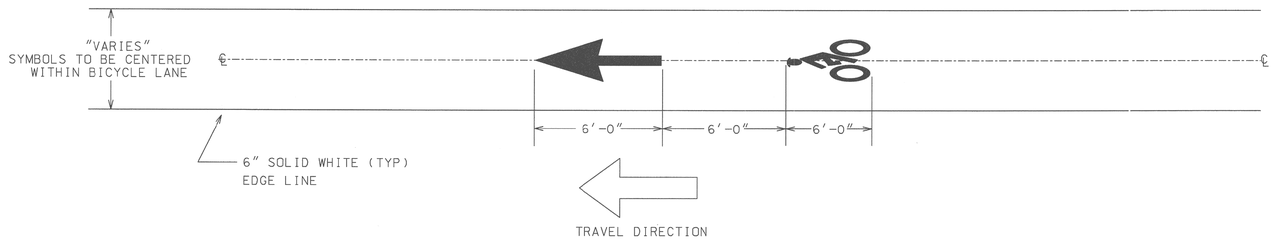
NO SCALE JANUARY 2000

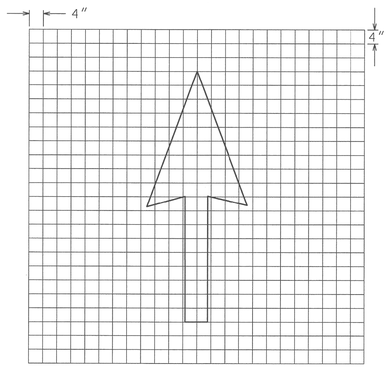
PCFRSH

PCBDTB

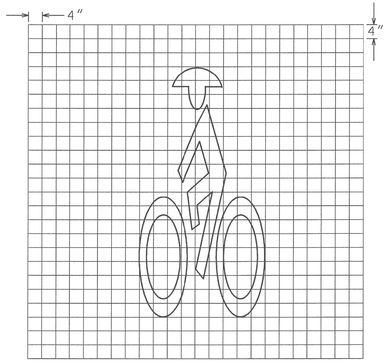
T-15C

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	144	241





TYPE 1 ARROW - BICYCLE LANE



TYPE 4 SYMBOL - BICYCLE LANE

GENERAL NOTES:

1. BICYCLE LANE SYMBOLS SHALL BE PLACED ON THE FAR SIDE OF EACH INTERSECTION 6 FEET BEYOND THE CROSS WALK OR END OF INTERSECTING ROAD RADII. ADDITIONAL SYMBOLS MAY BE PLACED ON LONG, UNINTERRUPTED SECTIONS OF ROADWAY BASED ON ENGINEERING JUDGEMENT.

2. ALL BICYCLE LANE PAVEMENT MARKING, INCLUDING EDGE LINE, SHALL BE PAINT.

3. FOR ADDITIONAL INFORMATION REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, CURRENT EDITION.

DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

DETAILS OF
BICYCLE LANE
PAVEMENT MARKINGS

NO SCALE JANUARY 2000

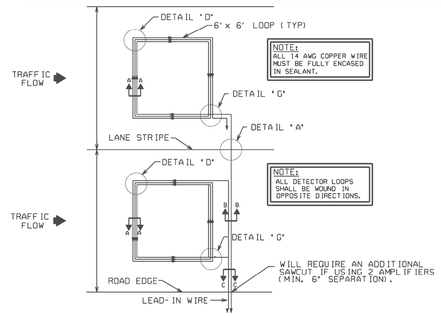
PC207B

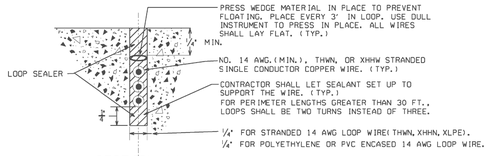
STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		CSHPP-0007-00(310)	145	241

INDUCTIVE LOOP VEHICLE DETECTOR DETAILS

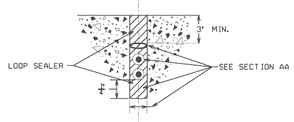
USING STRANDED COPPER WIRE

PLAN VIEW OF STANDARD LOOP SAW CUTS

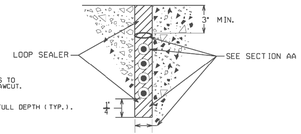




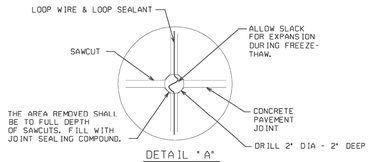
SECTION AA



SECTION BB

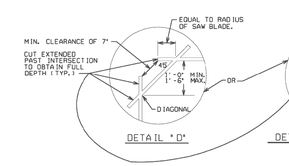


SECTION CC

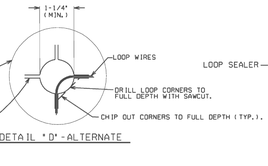


DETAIL "A"

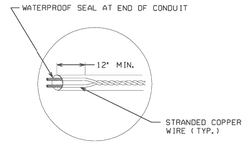
NOTE: USE FOR CONCRETE PAVEMENT ONLY.



DETAIL "D"



DETAIL "D"-ALTERNATE



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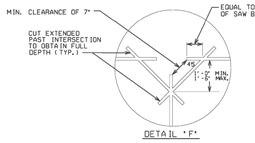

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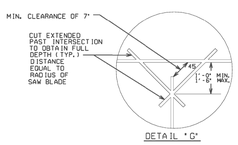
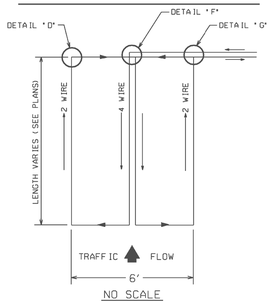


DETAIL "G"

PLAN VIEW OF QUADRUPOLE

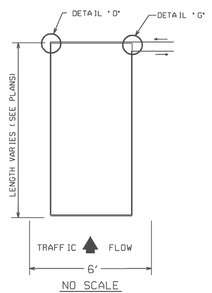


NO SCALE

LOOP WIRE CONFIGURATION

THE DOUBLE LAYER CONFIGURATION (2-4-2) SHOWN IS A MINIMUM DESIGN FOR NORMAL INSTALLATIONS WHEN REQUIRED BY THE PLANS.

PLAN VIEW OF STANDARD LOOP



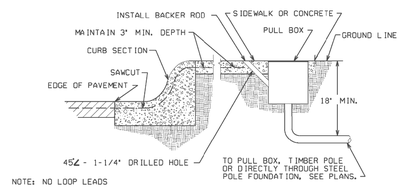
NO SCALE

LOOP WIRE CONFIGURATION

THE DOUBLE LAYER CONFIGURATION (2-2) SHOWN IS A MINIMUM DESIGN FOR NORMAL INSTALLATIONS WHEN REQUIRED BY THE PLANS.

TYPICAL CURB DETAIL

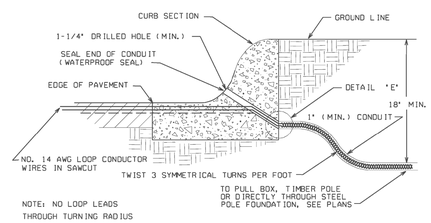
(WITH SIDEWALK)



NOTE: NO LOOP LEADS THROUGH TURNING RADIUS

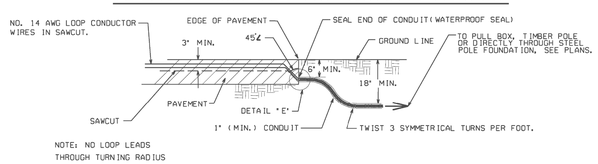
TYPICAL CURB DETAIL

(WITHOUT SIDEWALK)



NOTE: NO LOOP LEADS THROUGH TURNING RADIUS

DETAIL WHERE NO CURB EXISTS

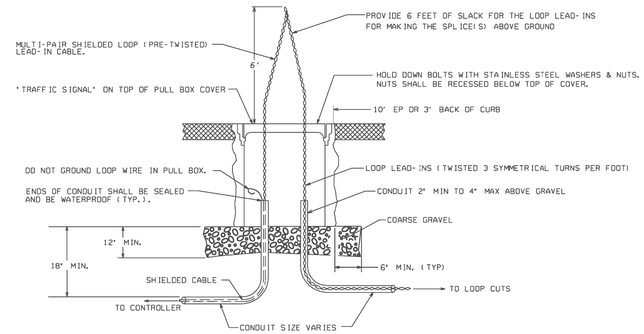


NOTE: NO LOOP LEADS THROUGH TURNING RADIUS

Guidelines For Usage On Metric Projects

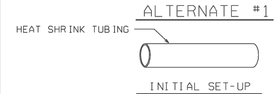
When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1"=25mm, 4"=100mm, and 12" or 1'=300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

PULL BOX-SPLICE DETAILS

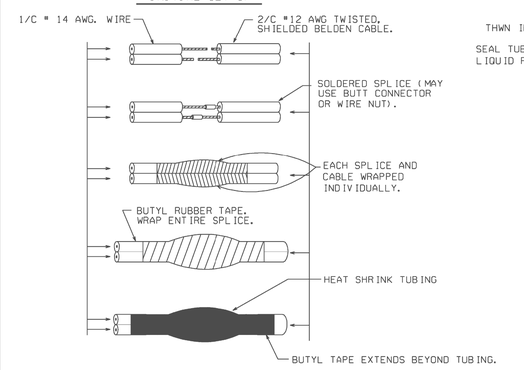


SPLICE DETAILS

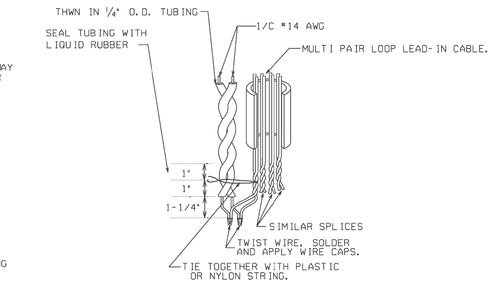
ALTERNATE #1



INITIAL SET-UP

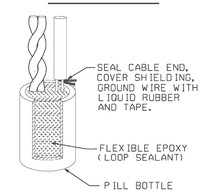


ALTERNATE #2



NOTE:
FINISHED SPLICE MUST BE WATERPROOF.

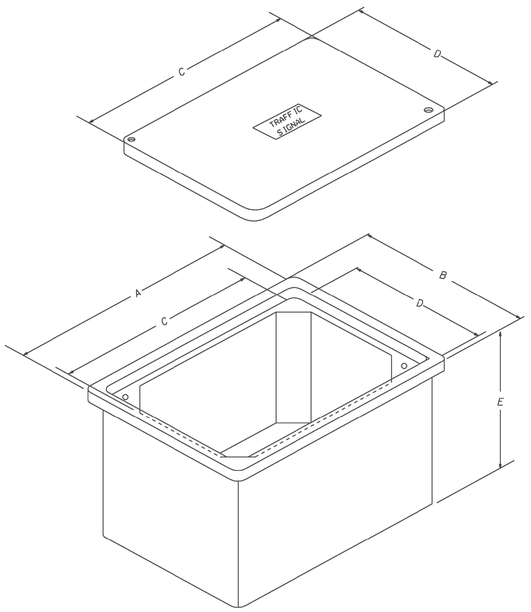
FINISHED SPLICE



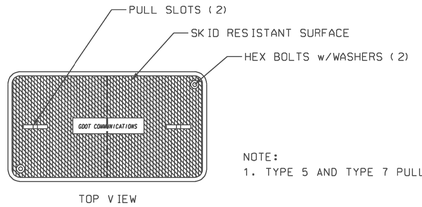
DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION DESCRIPTION	TRAFFIC SIGNAL DETAIL *INDUCTIVE-LOOP* *DETECTOR INSTALLATION*	
REV. BY:	APRIL 2010 NOT TO SCALE - REPORT ERRORS	DETAIL NUMBER TS-01

STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		CSHPP-0007-00(310)	146	241

PULLBOX TYPES 1, 2 AND 3

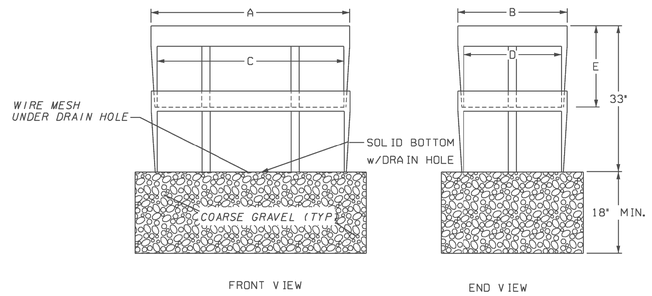


TYPE 4, 5, 4S, 5S, 6, AND 7 PULLBOX ASSEMBLIES



TOP VIEW

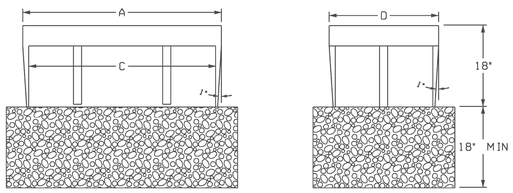
NOTE:
1. TYPE 5 AND TYPE 7 PULL BOXES SHALL HAVE SPLIT LID



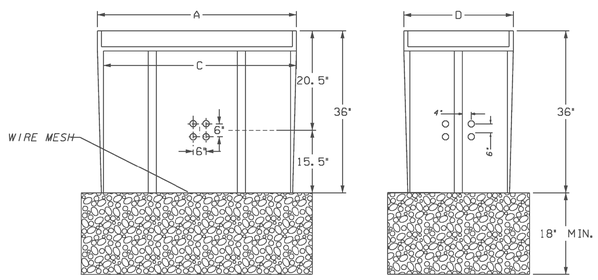
FRONT VIEW

END VIEW

TYPE 4 AND 5 STACKABLE ASSEMBLY

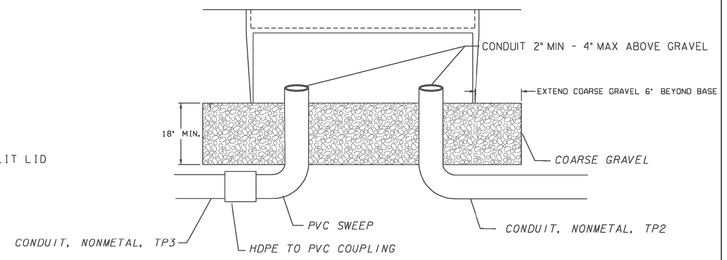


TYPE 4S AND 5S



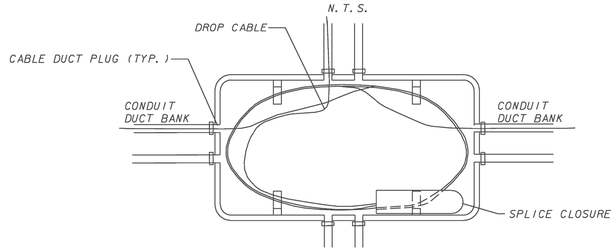
TYPE 6 AND 7

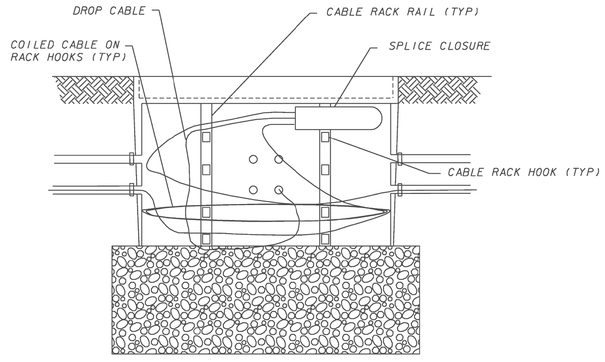
TYPICAL CONDUIT ENTRANCE DETAILS
TYPE 1,2,3,4S & 5S



FIBER OPTIC CABLE MANAGEMENT IN TYPE 4,5,6 & 7 PULL BOX

N.T.S.





FIBER TRUNK AND DROP CABLE IN CLOSURE SHALL BE COILED TOGETHER. SEPARATE FIBER CABLES SHALL BE COILED SEPARATELY AND SUPPORTED ON SEPARATE RACK HOOKS.

PULL BOX TYPE	* SIZE (IN.)				
	A	B	C	D	E
1	14	14	12	12	12
2	21	14	18	11	12
3	33	20	30	17	12
4S	38	26	36	24	18
4	38	26	36	24	36
5S	50	32	48	30	18
5	50	32	48	30	36
6	38	26	36	24	36
7	50	32	48	30	36

NOTES:
1. SIZES SHOWN ARE MINIMUM TRADE SIZES.
2. DIMENSIONS "C" AND "D" ARE MINIMUM REQUIREMENTS WITH A TOLERANCE OF NO MORE THAN (-.050 IN/ + 2 IN)
3. EXTEND COARSE GRAVEL 6" BEYOND BASE OF PULL BOX
4. PULL BOXES TYPE 4, 4S, 5, 5S, 6 & 7 SHALL HAVE 1" (DEGREE) FLARES FOR MAXIMUM STRENGTH
5. DESIGN PULL BOXES TO MEET OR EXCEED THE TIER LOADING SET FORTH IN SPECIFICATIONS 647.

Guidelines For Usage On Metric Projects

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DATE	REVISION	BY

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRAFFIC SIGNAL DETAIL

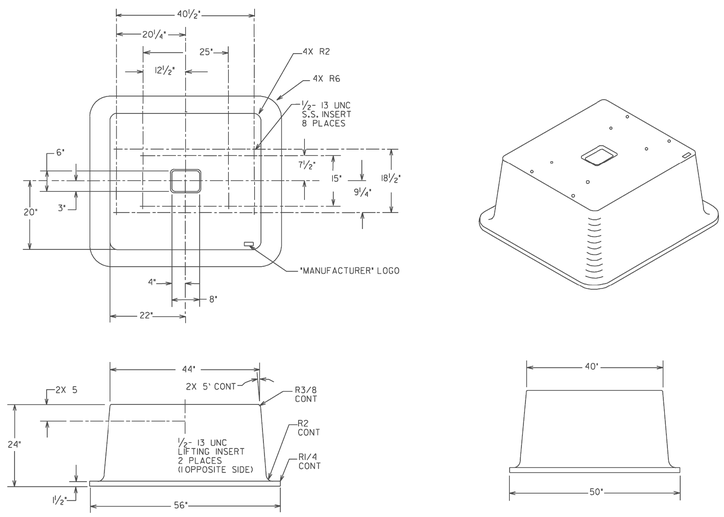
PULLBOX ASSEMBLY AND INSTALLATION

APRIL 2010

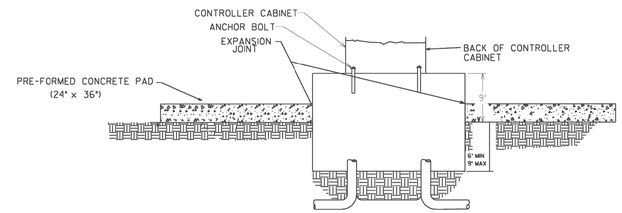
NOT TO SCALE - REPORT ERRORS

DETAIL NUMBER
TS-02

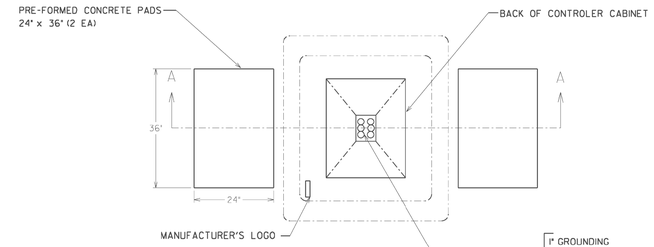
STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		CSHPP-0007-00(310)	147	241



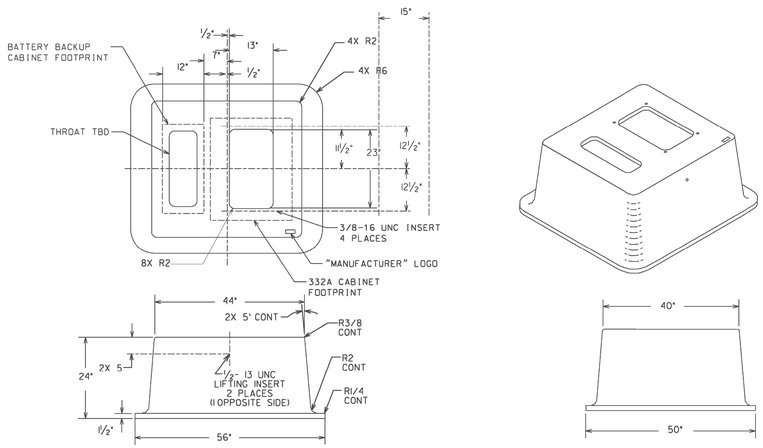
PREFABRICATED 332 CONTROLLER BASE



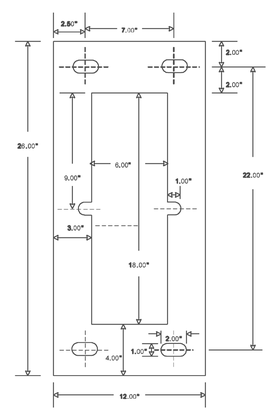
SECTION A-A



6 EA CONDUIT
- 1" GROUNDING
- 1" TELEPHONE LINE
- 1" ELECTRICAL POWER SUPPLY
- 2" SIGNAL CABLE & DETECTOR LEAD- IN
- 2" INTERCONNECT CABLES or 2 1/2" 50 PR CABLE
- 2" STUBBED OUT OR CAPPED

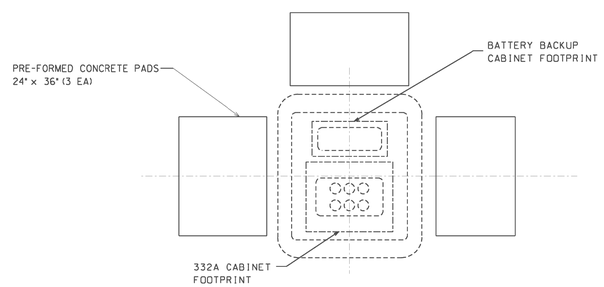


PREFABRICATED CONTROLLER BASE
WITH BATTERY BACKUP BASE MOUNT EXTENSION



BATTERY BACKUP BASE MOUNT
CABINET ANCHOR BOLT PATTERN

NOTE: MODEL 332 CONTROLLER CABINETS
WITH BATTERY BACKUPS REQUIRES THREE PADS



Guidelines For Usage On Metric Projects

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DATE	REVISION DESCRIPTION	REV. BY:

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRAFFIC SIGNAL DETAIL

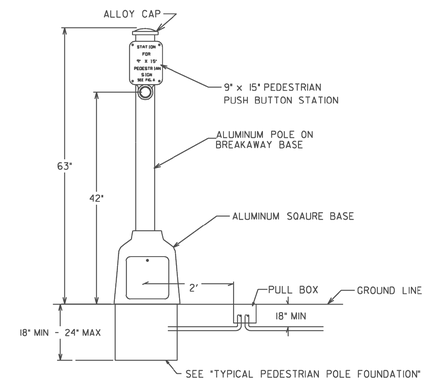
CABINET BASE DETAIL

APRIL 2010

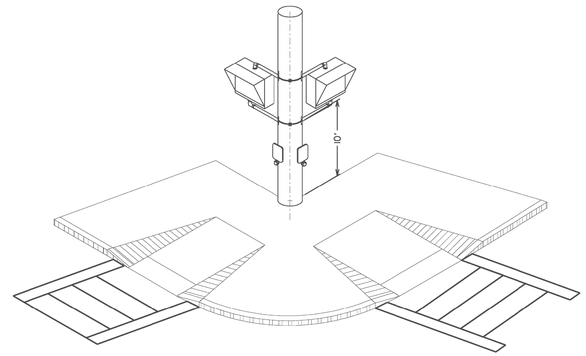
NOT TO SCALE - REPORT ERRORS

DETAIL NUMBER
TS-03

STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		CSHPP-0007-00(310)	148	241

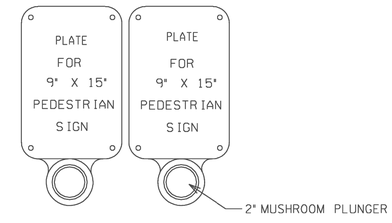


PEDESTRIAN PUSH BUTTON POST



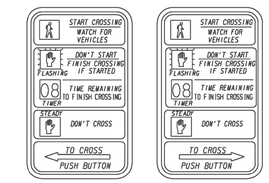
PEDESTRIAN SIGNAL HEAD ORIENTATION FOR SIDE OF POLE MOUNTING

INSTALL PEDESTRIAN SIGNAL HEADS SO THAT VEHICLES MAKING TURNS WILL NOT DAMAGE THE EQUIPMENT



A "PUSH BUTTON STATION" IS THAT PIECE OF EQUIPMENT THAT CONTAINS THE PEDESTRIAN INSTRUCTIONAL SIGN PLATE AND THE PUSH BUTTON

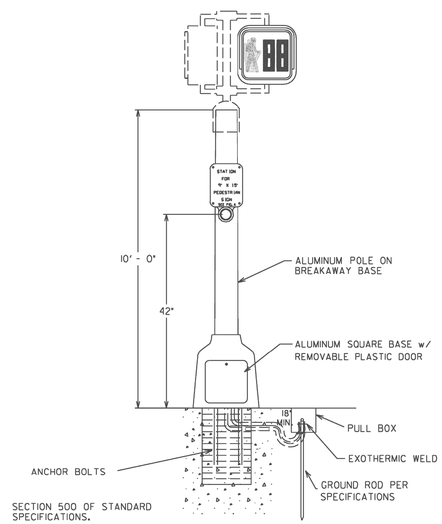
PEDESTRIAN PUSH BUTTON STATION



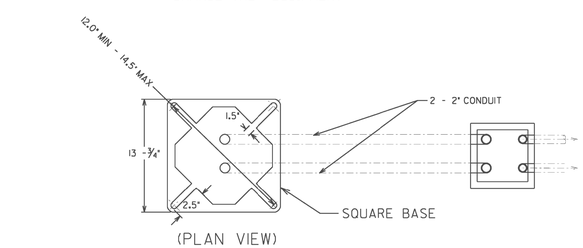
R10-3E(L) 9" X 15"

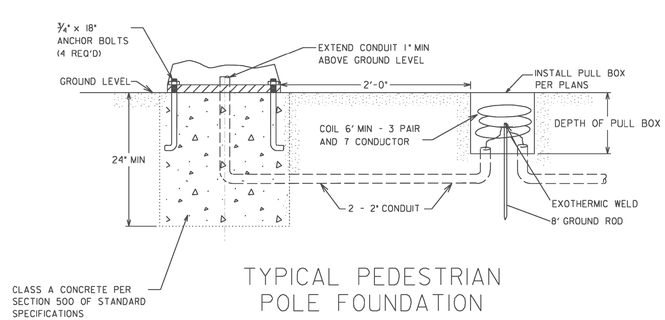
R10-3E(R) 9" X 15"

PEDESTRIAN SIGNS

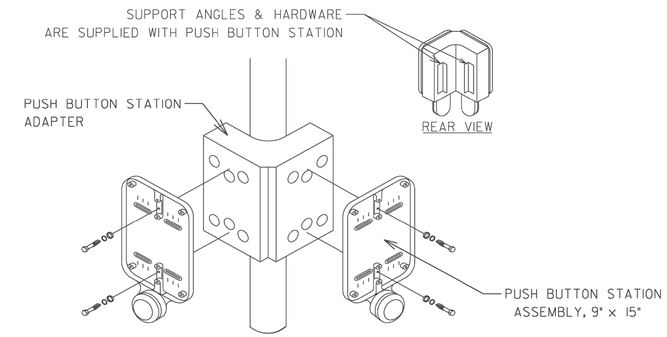


DETAIL FOR PEDESTRIAN SIGNAL POLES





TYPICAL PEDESTRIAN POLE FOUNDATION



DOUBLE PUSH BUTTON STATION ADAPTER FOR 4" DIA. PEDESTRIAN POLE

NOTE:
DETAILS SHOWN IS FOR TOP POST MOUNTING ASSEMBLY ON 10 FEET PEDESTRIAN POLE.
A CLAMSHELL MOUNTING ASSEMBLY (NOT SHOWN) MAY BE USED AS APPROVED BY THE DEPARTMENT.
THE CLAMSHELL MOUNTING HARDWARE ASSEMBLY SHALL MEET THE SAME GDOT STANDARDS AS THE PEDESTRIAN SIGNAL HOUSING IN PAINT AND MATERIAL.

Guidelines For Usage On Metric Projects

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REV. BY:	REVISION DESCRIPTION	DATE

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRAFFIC SIGNAL DETAIL

PEDESTRIAN FACILITIES INSTALLATION DETAILS

APRIL 2010

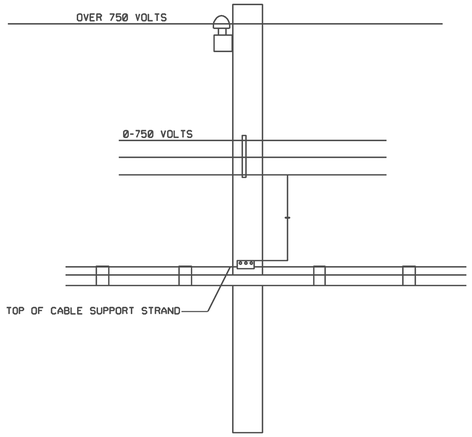
NOT TO SCALE - REPORT ERRORS

DETAIL NUMBER
TS-03A

STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		CSHPP-0007-00(310)	149	241

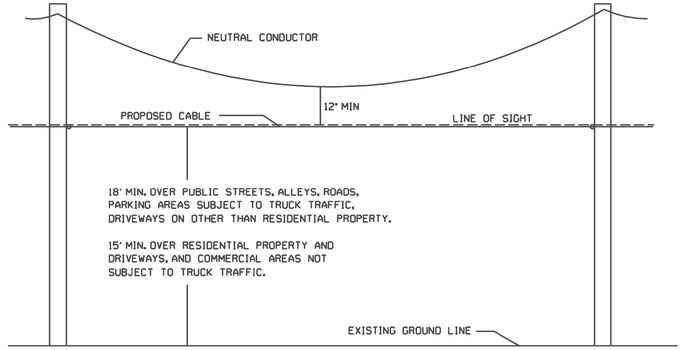
TYPICAL DETAIL "A"

TYPICAL POWER SEPARATION AT POLE



TYPICAL DETAIL "B"

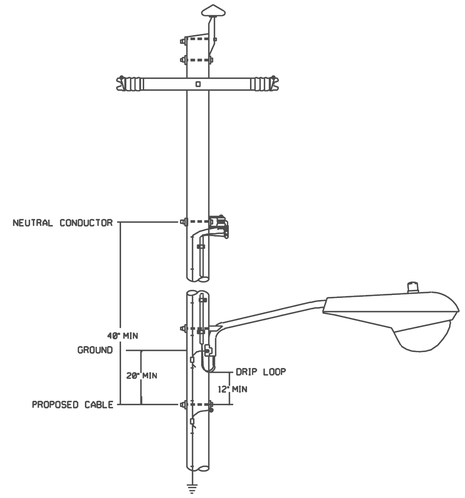
SEPARATION REQUIREMENTS FOR MID-SPAN AND AT CROSSINGS



THE VERTICAL SEPARATION FROM NEUTRAL CONDUCTORS SHALL BE INCREASED SO THAT THE LOWEST POINT OF THE NEUTRAL CONDUCTOR (IN THE SPAN OR AT THE CROSSING) WILL BE AT LEAST 12 INCHES ABOVE THE COMMUNICATION CABLE ATTACHMENT LEVEL (LINE OF SIGHT) AS ILLUSTRATED ABOVE.

TYPICAL DETAIL "C"

STREET LIGHT BRACKET SEPARATION
NOTE: SEE TABLE BELOW



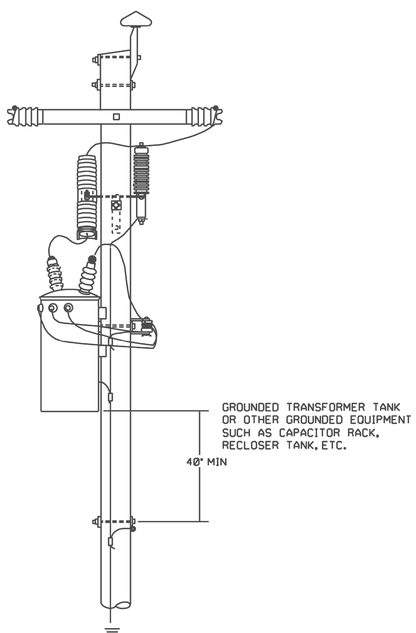
VERTICAL CLEARANCES AT THE POLE FOR SPAN WIRES AND BRACKETS FOR STREET LIGHTS (RULE 238C)

TYPE OF CLEARANCE	CLEARANCE (IN.)			
	IF EFFECTIVELY GROUNDED	IF NOT EFFECTIVELY GROUNDED		
		FOR LUMINAIRES		FOR TROLLEY CONDUCTORS
		UP TO 150V	OVER 150V	
ABOVE COMMUNICATION CROSS ARMS	20 (A)	20 (A)	20 (A)	20 (A)
BELOW COMMUNICATION CROSS ARMS	24	24	40	24
ABOVE COMMUNICATION CABLES	4	20 (A)	20 (A)	12
BELOW COMMUNICATION CABLES	4	20	40	12
FROM COMMUNICATION TERMINAL BOXES	4	20 (A)	20 (A)	12 (B)
FROM COMMUNICATION BRACKETS BRIDLE WIRE RINGS, AND DRIVE HOOKS	4	16 (A)	16 (A)	4

NOTES A. MAY BE REDUCED TO 12 IN. FOR WIRES OR PARTS OF BRACKETS 40 IN. OR MORE FROM SURFACE OF POLE
B. IF OBTAINABLE IF NOT, MAXIMUM OBTAINABLE

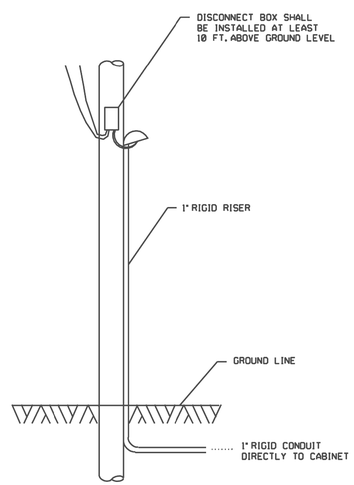
TYPICAL DETAIL "D"

TYPICAL TRANSFORMER AND POWER RISER SEPARATION WITHOUT GUARD ARM



TYPICAL DETAIL "E"

TYPICAL DISCONNECT BOX INSTALLATION



Guidelines For Usage On Metric Projects

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DATE	REVISION DESCRIPTION	REV. BY:

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRAFFIC SIGNAL DETAIL

UTILITY CLEARANCE DETAIL

APRIL 2010

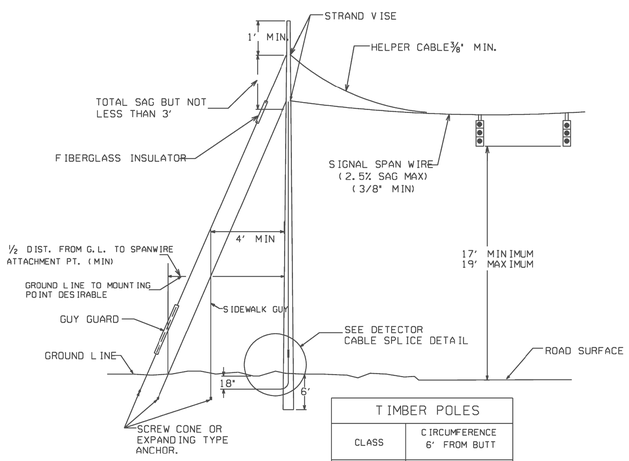
NOT TO SCALE - REPORT ERRORS

DETAIL NUMBER

TS-08

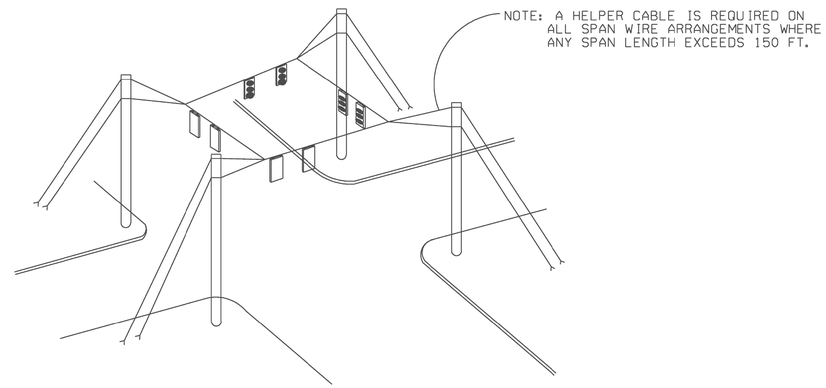
STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		CSHPP-0007-00(310)	150	241

SAG = .025 SPAN LENGTH
SPAN LENGTH = LONGEST DISTANCE BETWEEN ANY TWO SUPPORT POLES IN INSTALLATION.

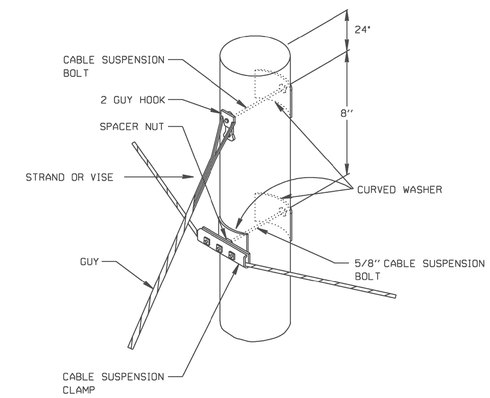


TIMBER POLES	
CLASS	CIRCUMFERENCE 6' FROM BUTT
I	41.0"
II	38.5"

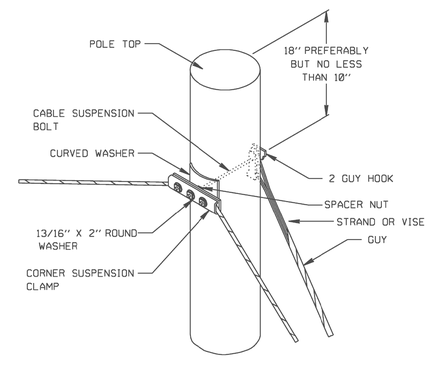
TYP. TIMBER SIGNAL POLE DETAIL

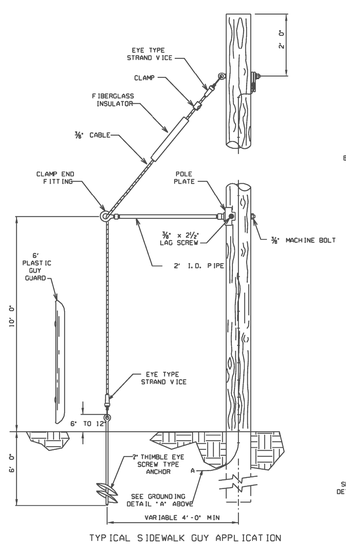


TYPICAL DETAIL "D"
SUSPENSION STRAND - PULL TOWARD POLE - LESS THAN 5 FEET

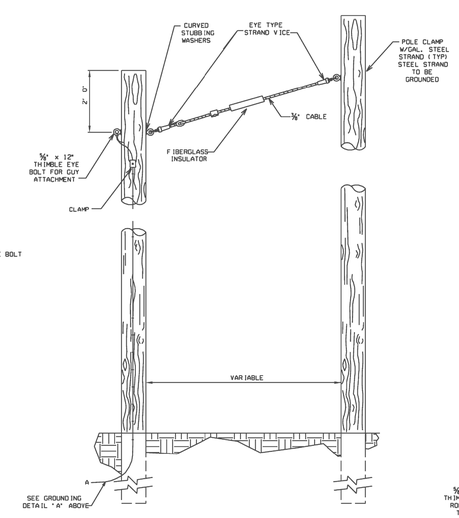


TYPICAL DETAIL "E"
SUSPENSION STRAND - PULL AWAY FROM POLE - 5 FEET OR MORE

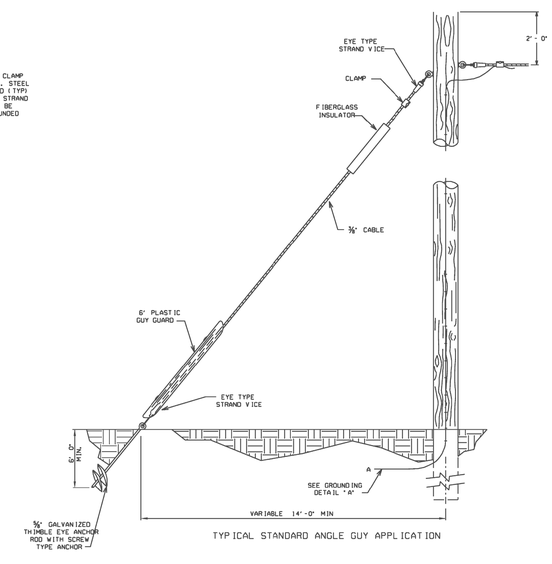




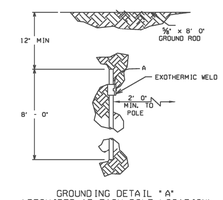
TYPICAL SIDEWALK GUY APPLICATION



TYPICAL AERIAL GUY APPLICATION



TYPICAL STANDARD ANGLE GUY APPLICATION



GROUNDING DETAIL "A"
(REQUIRED AT EACH POLE LOCATION)

Guidelines For Usage On Metric Projects

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REV.	BY:	REVISION DESCRIPTION	DATE

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRAFFIC SIGNAL DETAIL

STANDARD GUYING DETAILS

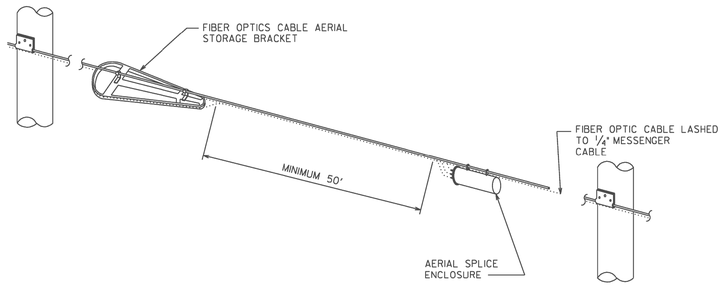
APRIL 2010

NOT TO SCALE - REPORT ERRORS

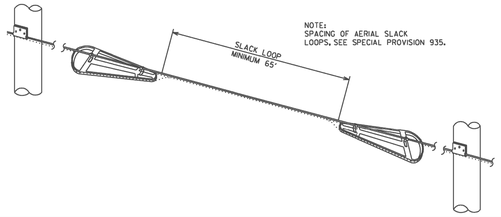
DETAIL NUMBER
TS-09

STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		CSHPP-0007-00(310)	151	241

AERIAL BUTT SPLICE DETAIL

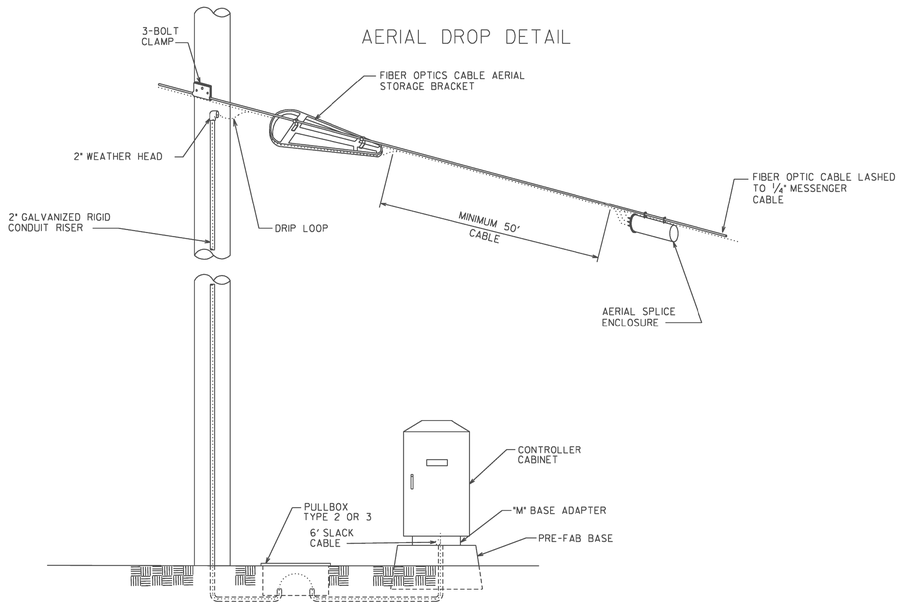


AERIAL SLACK LOOP DETAIL

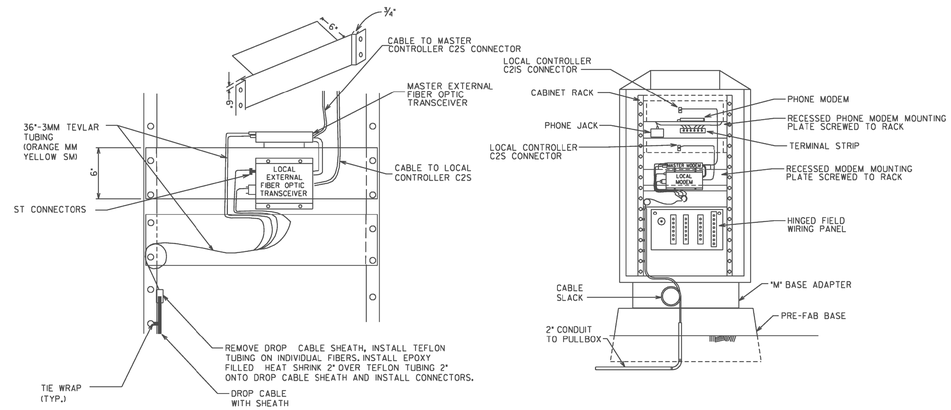


NOTE:
SPACING OF AERIAL SLACK LOOPS, SEE SPECIAL PROVISION 935.

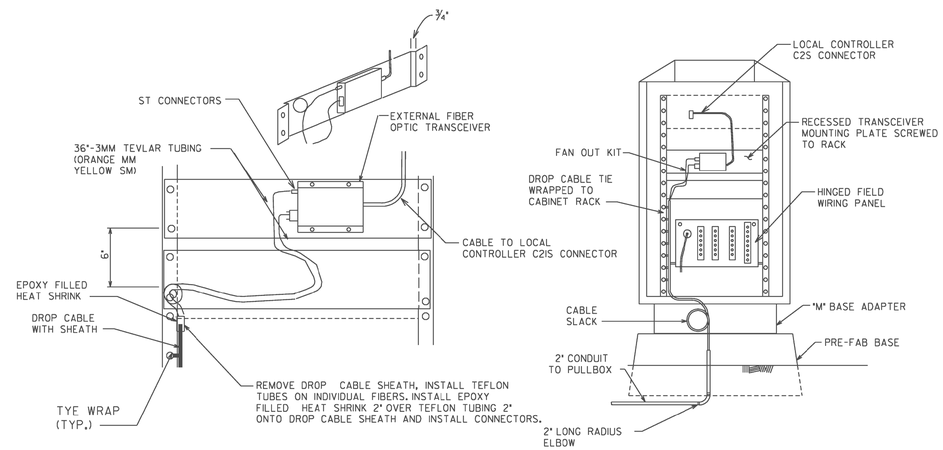
AERIAL DROP DETAIL



FIBER OPTIC DETAIL DROP - CABLE TERMINATION IN CONTROL CABINET MODEL 332 - MASTER SYSTEM



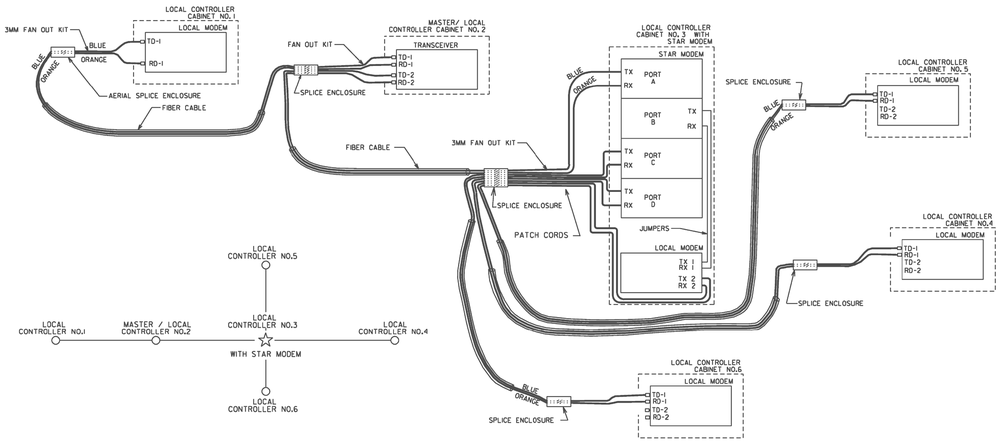
FIBER OPTIC DETAIL DROP-CABLE TERMINATION IN CONTROL CABINET - MODEL 332 LOCAL SYSTEM



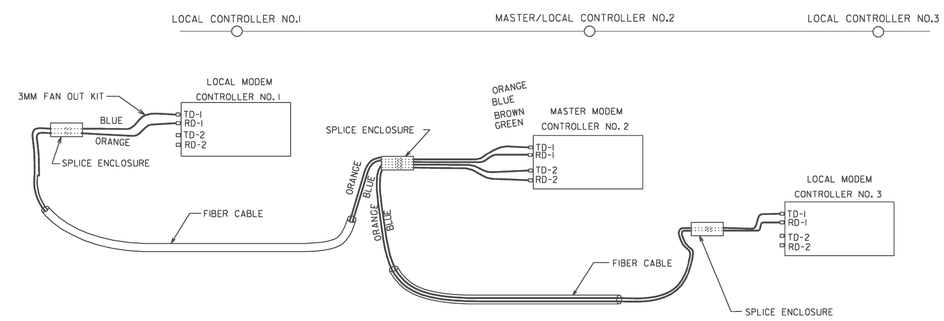
DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION DESCRIPTION	TRAFFIC SIGNAL DETAIL *FIBER OPTICS DETAILS* *1 OF 2*	
REV. BY:	*APRIL 2010* NOT TO SCALE - REPORT ERRORS	DETAIL NUMBER *TS-10*

STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		CSHPP-0007-00(310)	152	241

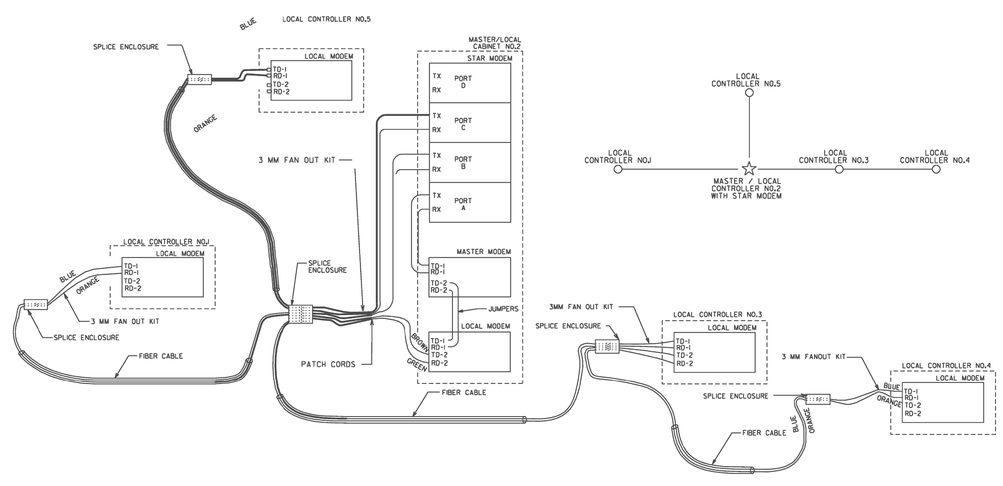
DROP CABLE SPLICE DETAIL FOR LOCAL CONTROLLER WITH STAR MODEM



FIBER OPTIC DISTRIBUTION DETAIL (CLOSED LOOP SYSTEM ONLY)



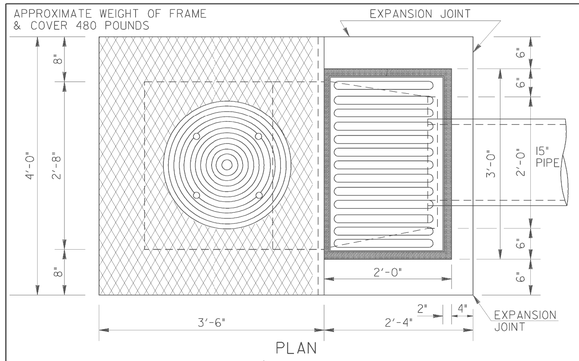
DROP CABLE SPLICE DETAIL FOR MASTER / LOCAL CONTROLLER WITH STAR MODEM

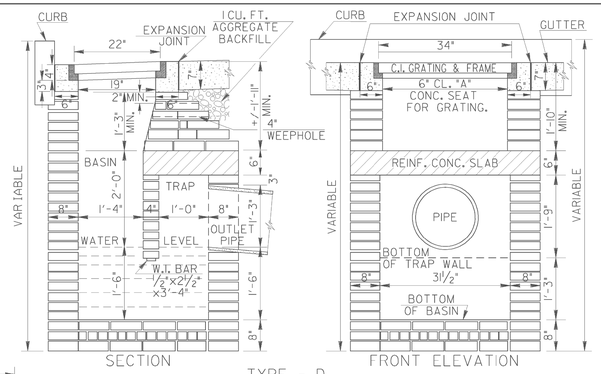


DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION DESCRIPTION	TRAFFIC SIGNAL DETAIL *FIBER OPTICS DETAILS* *2 OF 2*	
REV. BY:	*APRIL 2010* NOT TO SCALE - REPORT ERRORS	DETAIL NUMBER *TS-11*

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	153	241

APPROXIMATE WEIGHT OF FRAME & COVER 480 POUNDS



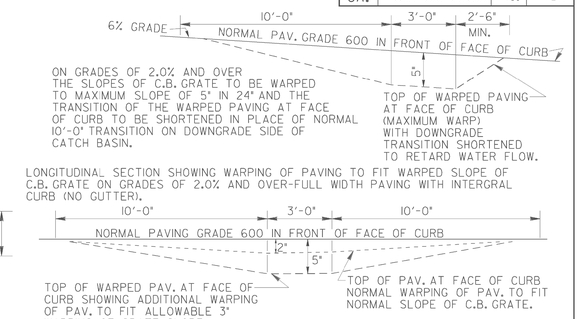


TYPE - D
TRAPPED BRICK INLET WITH GRATE
SECTION OF FRAME AND COVER

NOTE:
ALL CASTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

WEIGHTS
FRAME ESTIMATED 180 Lbs.
GRATING ESTIMATED 265 Lbs.
TOTAL 445 Lbs.

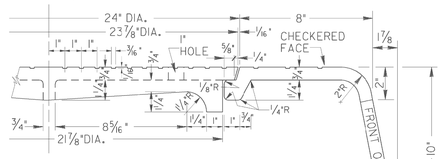
NOTE:
CASTINGS ARE CITY OF ATLANTA STD. AND MODIFICATION AS SHOWN FOR SECTION OF FRAME AND COVER.

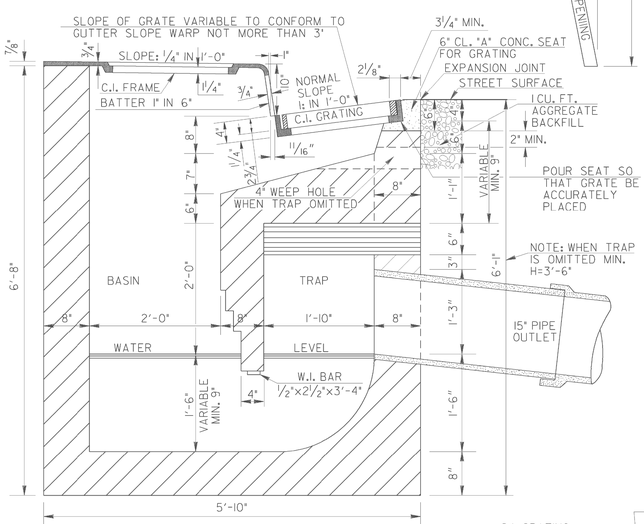


ON GRADES OF 2.0% AND OVER THE SLOPES OF C.B. GRATE TO BE WARPED TO MAXIMUM SLOPE OF 5" IN 24" AND THE TRANSITION OF THE WARPED PAVING AT FACE OF CURB TO BE SHORTENED IN PLACE OF NORMAL 10'-0" TRANSITION ON DOWNGRADE SIDE OF CATCH BASIN.

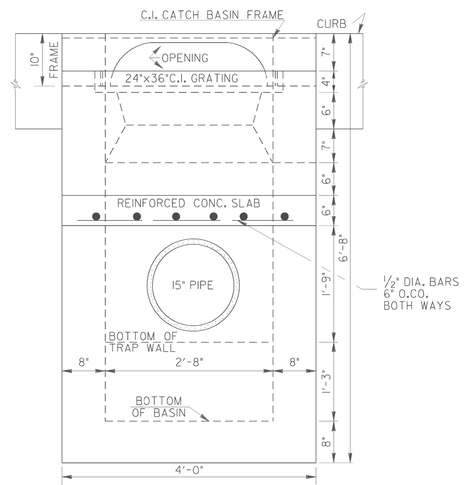
LONGITUDINAL SECTION SHOWING WARPING OF PAVING TO FIT WARPED SLOPE OF C.B. GRATE ON GRADES OF 2.0% AND OVER-FULL WIDTH PAVING WITH INTERGRAL CURB (NO GUTTER).

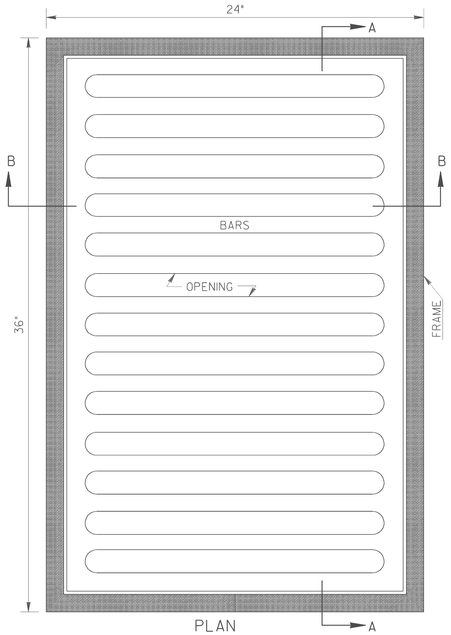
LONGITUDINAL SECTION SHOWING WARPING OF PAVING TO FIT SLOPE OF GRATING WHERE PAVING IS FULL WIDTH WITH INTERGRAL CURB (AND NO GUTTER).



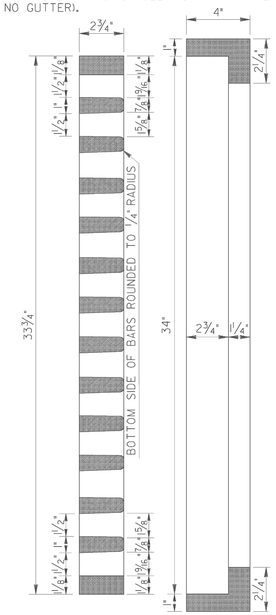


TYPE - A TRAPPED BRICK C.B. WITH HOOD
USE SMALL BRICK SIZE 8"x3 3/4"x2 1/8"





STORM WATER GRATING



SECTION A-A
SCALE: HOR. 1"=3'-0"
VERT. 1"=1'-0"

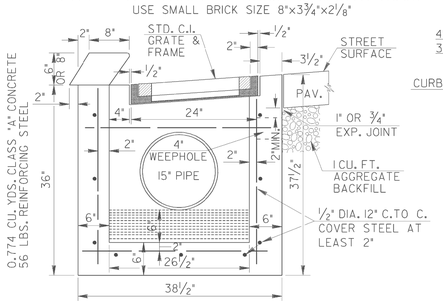
NOTE:
WEEPHOLES MAY BE 4" DIA. ROUND OR 4" SQUARE AT THE OPTION OF THE CONTRACTOR. AGGREGATE FOR BACKFILL SHALL CONSIST OF A MIXTURE OF 50% SIZE 57, M-58, 357, OR 467 COARSE AGGREGATE AND 50% SIZE 10 SAND AND SHALL BE PLACED IMMEDIATELY PRIOR TO COMPACTING OF THE BASE MATERIAL.

NOTE:
OPENINGS IN GRATES SHALL BE PERPENDICULAR TO DIRECTION OF TRAFFIC FOR ALL STRUCTURES.

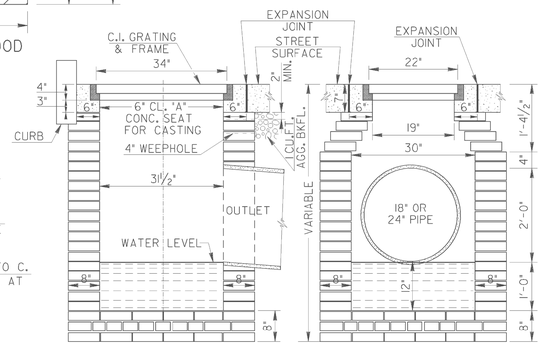
STD. 1019B GRATE MAY BE SUBSTITUTED FOR IMPROVED HYDRAULIC CAPACITY.

SPECIAL NOTE:
THIS STANDARD SHOULD BE USED ONLY IN SAGS OR LOW POINTS. SEE OTHER STANDARDS FOR MORE EFFICIENT DRAINAGE STRUCTURES ON GRADES.

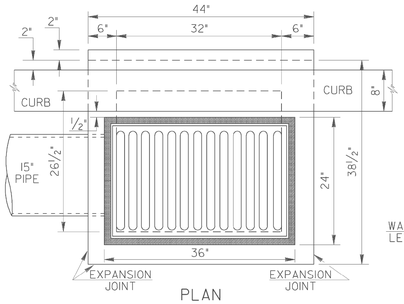
GENERAL NOTE:
ALL TRAPS WILL BE OMITTED UNLESS SHOWN ON PLANS.



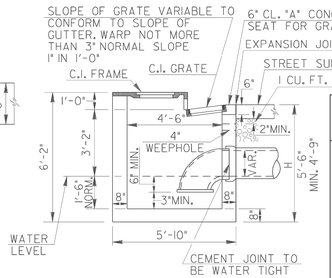
TYPE - B CONC. INLET BASIN



TYPE - C BRICK INLET BASIN



CONC. INLET BASIN

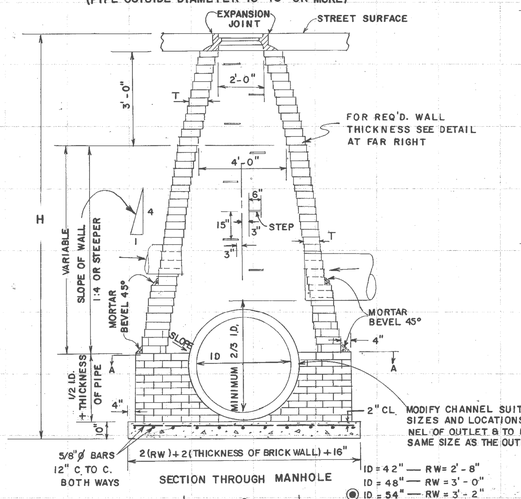


TYPE - A
TRAPPED BRICK C.B. WITH HOOD WITH TYPE E TRAP

	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
	REVISION	STANDARD CATCH BASINS WITH CAST IRON GRATE INLETS REV. & REDR. SEPT. 1999
BY	DES. ____ (SUBMITTED) STATE ROADWAY AIRPORT DESIGN ENGINEER DRW. ____ TRA. ____ (APPROVED) CHIEF ENGINEER CHK. ____	NUMBER 1010

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	154	241

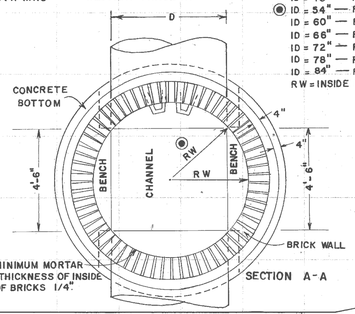
BRICK MANHOLE SECTION
(PIPE OUTSIDE DIAMETER IS 48" OR MORE)



SECTION THROUGH MANHOLE

MODIFY CHANNEL SUIT PIPE SIZES AND LOCATIONS CHANNEL OF OUTLET & TO BE THE SAME SIZE AS THE OUTLET PIPE.

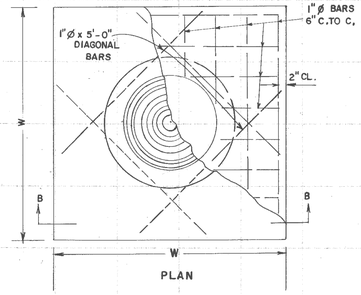
ID = 42" — RW = 2'-8"
ID = 48" — RW = 3'-0"
◉ ID = 54" — RW = 3'-2"
ID = 60" — RW = 3'-4"
ID = 66" — RW = 3'-7"
ID = 72" — RW = 3'-9"
ID = 78" — RW = 3'-11"
ID = 84" — RW = 4'-2"
RW = INSIDE RADIUS OF WALL

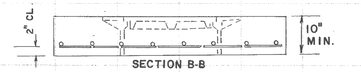


NOTE: MINIMUM MORTAR JOINT THICKNESS OF INSIDE EDGE OF BRICKS 1/4".

SECTION A-A

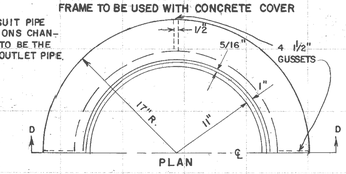
REINFORCED CONCRETE COVER

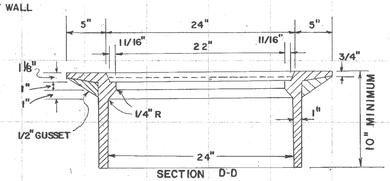




SECTION B-B

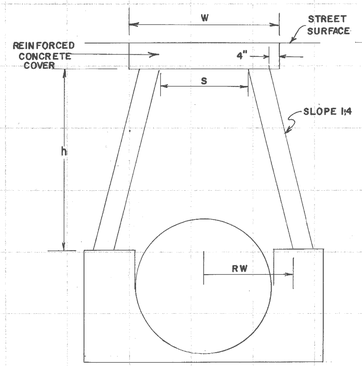
FRAME TO BE USED WITH CONCRETE COVER





SECTION D-D
SCALE: 1 1/2" = 1'

PLACEMENT FOR CONCRETE COVER



FORMULA FOR COMPUTING W
RW = INSIDE RADIUS OF WALL
S = 2RW − 1/2
W = S + 24"

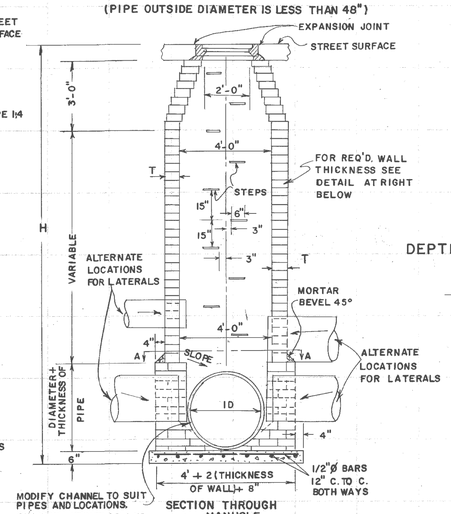
NOTE: USE CONCRETE COVER WITH MANHOLE CASTINGS IF FILL FROM TOP OF PIPE TO FINISHED SURFACE IS LESS THAN:
4'-6" FOR 42" PIPE
5'-0" FOR 48" PIPE
5'-6" FOR 54" PIPE
6'-0" FOR 60" PIPE
6'-6" FOR 66" PIPE
7'-0" FOR 72" PIPE
7'-6" FOR 78" PIPE
8'-0" FOR 84" PIPE

THICKNESS OF BRICK WALL
(SEE DETAIL AT FAR RIGHT)

DEPTH	THICKNESS (T)
TO 10'	*8" MIN.
10' TO 20'	12" MIN.
20' TO 30'	16" MIN.

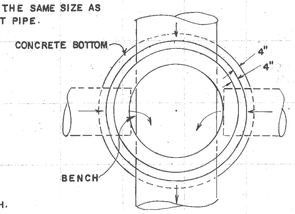
*FOR COMBINATION BRICK & PRECAST M.H. (SEE BELOW) ONLY 12" OR 16" BRICK WALL THICKNESS IS TO BE USED FOR BASE.

BRICK MANHOLE SECTION
(PIPE OUTSIDE DIAMETER IS LESS THAN 48")



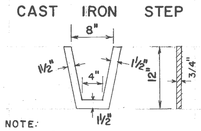
SECTION THROUGH MANHOLE

MODIFY CHANNEL TO SUIT PIPES AND LOCATIONS. CHANNEL AT OUTLET END TO BE THE SAME SIZE AS OUTLET PIPE.



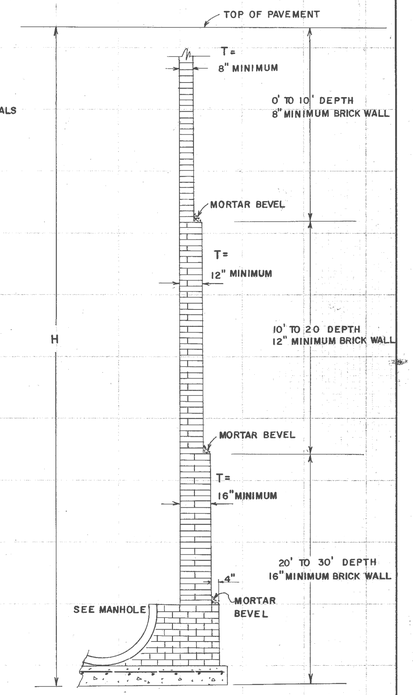
SECTION A-A

CAST IRON STEP

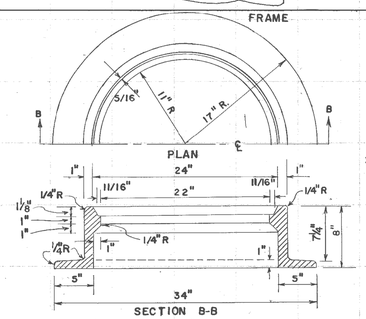


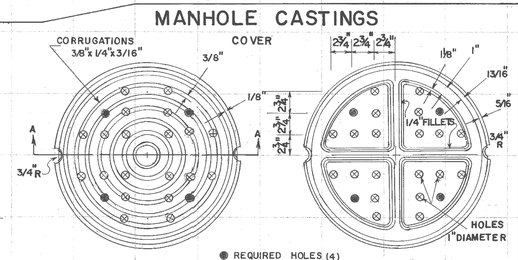
NOTE:
STEPS ARE REQUIRED IN ALL MANHOLES WHERE "H" IS GREATER THAN 4'-0". NUMBER AND LOCATION OF STEPS TO BE AS DIRECTED BY THE ENGINEER. PLASTIC OR RUBBER COATED STEPS LISTED IN THE GA. D.O.T. QUALIFIED PRODUCTS MANUAL MAY BE SUBSTITUTED.

DEPTH LIMITS FOR INCREASING WALL THICKNESS



MANHOLE CASTINGS

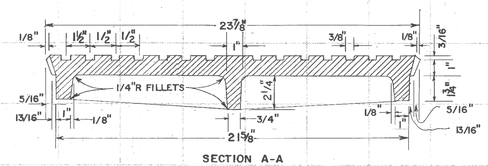




● REQUIRED HOLES (4)
⊗ OPTIONAL HOLES

APPROXIMATE WEIGHTS

C.I. FRAME	282 LBS.
C.I. COVER	178 LBS.



SECTION A-A
SCALE 3" = 1'

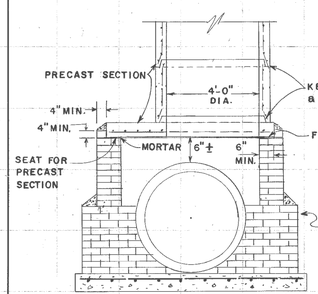
NOTE: COVER AND FRAME MUST BE FITTED BEFORE LEAVING SHOP. PAINT ACTUAL WEIGHT OF EACH CASTING ON ITS FACE.

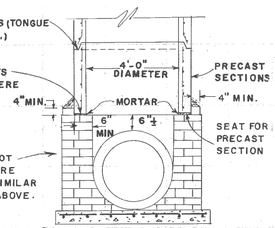
MANHOLE FRAME & COVER SHOWN ON STD. 1011 A PRECAST MAY BE USED AN ALTERNATE TO CASTINGS SHOWN HERE.

ALTERNATE - COMBINATION BRICK & PRECAST MANHOLES

NOTES FOR COMBINATION MANHOLE:
— BRICK PORTION OF MANHOLE WILL BE CONSTRUCTED WITH SEAT TO GIVE BEST POSSIBLE FIT FOR PRECAST UNIT. MINIMUM THICKNESS FOR BRICK WALL WILL BE 12" FOR H TO 20 FT. AND 16" FOR H=20 FT. TO 30 FT.
— PRECAST UNIT WITHOUT TONGUE OR GROOVE AT BOTTOM SHALL BE PLACED IN BRICK SEAT WITH MORTAR IN JOINT ALL ROUND. BRICK BASE SHALL SET FOR 24 HOURS MIN. BEFORE PRECAST SECTIONS ARE INSTALLED.
— STEPS IN THE BRICK PORTION OF MANHOLE WILL BE IN ALIGNMENT WITH AND MATCH THE STEPS IN THE PRECAST SECTIONS RATHER THAN AS SHOWN FOR THE ALL BRICK MANHOLES.

SEE STANDARD 1011A PRECAST FOR PRECAST MANHOLE DETAILS.





DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
BRICK MANHOLES

SCALE AS SHOWN — REV. & REDR. OCTOBER, 1981

DES. 8-58
DRW. R.M.U.
TRA. G.M.E.
CHK. R.K.C.

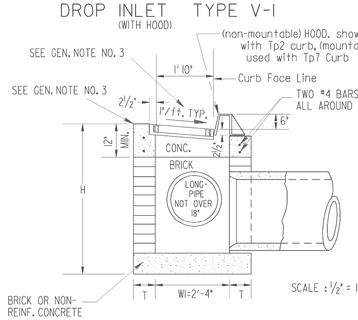
(SUBMITTED) Floyd E. Hardy
STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) Thomas D. Moreland
STATE HIGHWAY ENGINEER

NUMBER 1011A

FORM EF6

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	155	241

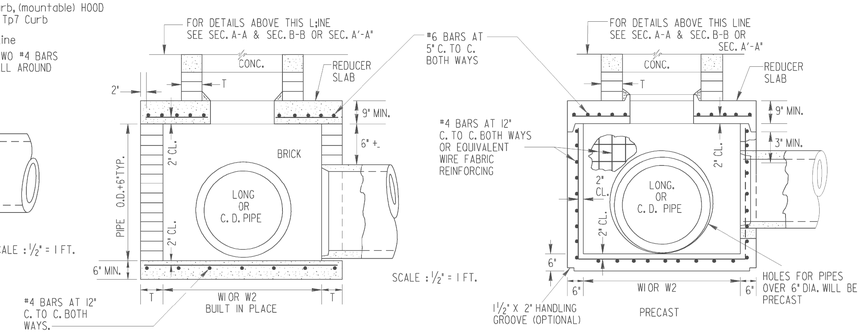
DROP INLET TYPE V-1 (WITH HOOD)



SECTION A-A
(SEE GEN. NOTE NO. 7)

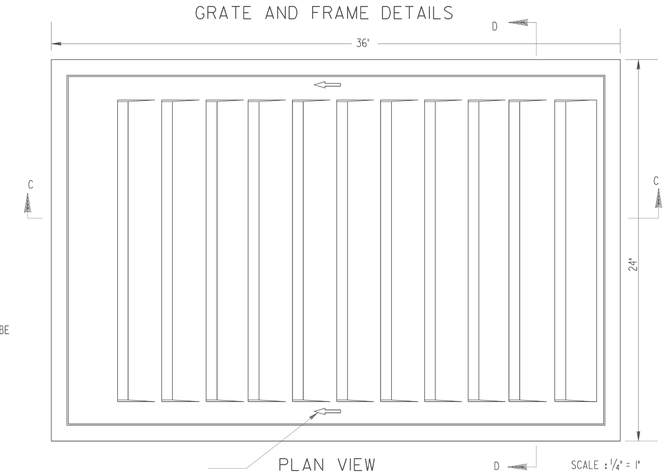
(DROP INLET TYPE V-1 OR TYPE V-2:)

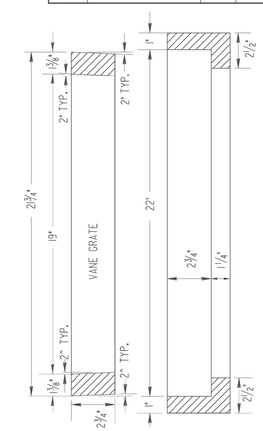
REDUCER SLABS OR BRICK TAPER (bottom left) ARE FOR USE WITH LARGER PIPES, IN GENERAL THIS WILL BE CROSS DRAIN PIPES OVER 24", LONGITUDINAL PIPES OVER 18" (Type V-1) AND LONGITUDINAL PIPES OVER 15" (Type V-2)



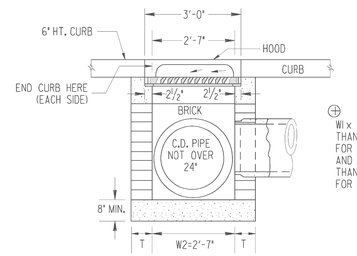
DETAIL OF REDUCING W1 OR W2 DIMENSIONS WITH REDUCER SLAB.

GRATE AND FRAME DETAILS





SECTION D-D



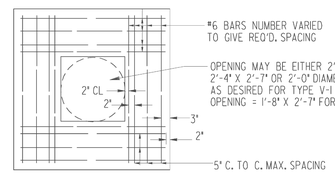
⊕ W1 x W2 NOT LESS THAN 2'-4" x 2'-7" FOR TYPE V-1 AND NOT LESS THAN 1'-8" x 2'-7" FOR TYPE V-2

SECTION B-B
SCALE : ½" = 1 FT.

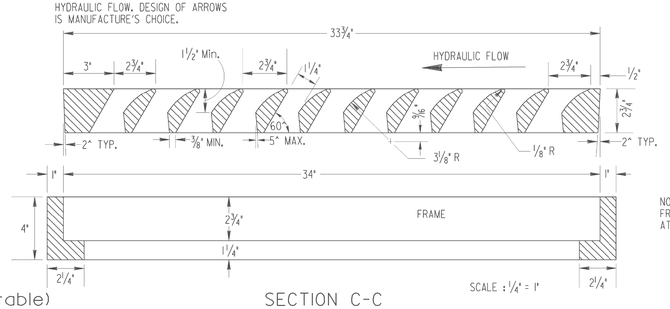
MINIMUM W1, W2 AND H DIMENSIONS			
PIPE SIZE	W1(MIN.) OR W2(MIN.) BRICK	W1(MIN.) OR W2(MIN.) REINF. CONC.	H (MIN.)
15"	⊕ 1'-8"	⊕ 1'-8"	3'-10"
18"	⊕ 2'-0"	⊕ 2'-0"	4'-2"
24"	2'-7"	2'-7"	4'-9"
30"	3'-4"	3'-6"	5'-10"
36"	3'-10"	4'-0"	6'-5"
42"	4'-5"	4'-6"	7'-0"
48"	5'-0"	5'-0"	7'-10"
54"	5'-7"	5'-6"	8'-5"
60"	6'-2"	6'-0"	9'-0"

NOTE:
THE MINIMUM H DIMENSIONS SHOWN ARE BASED ON TYPICAL OUTSIDE DIAMETERS OF PIPES AND MAY BE MODIFIED WHERE THE ENGINEER OR DESIGNER DETERMINES THAT CONDITIONS PERMIT.
IT IS NOT NECESSARY THAT THE BOX TYPE BASE BE SQUARE. W1 AND W2 DIMENSIONS WILL VARY ACCORDING TO PIPE SIZE.

BRICK WALL THICKNESS	
H	T (MIN.)
TO 10'	8"
10' TO 20'	12"
20' TO 30'	16"



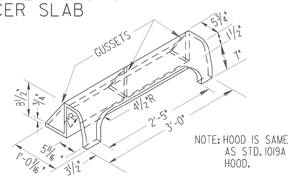
PLAN OF REINFORCING IN REDUCER SLAB



MATERIAL FOR GRATE: GRAY IRON, A.S.T.M. A-48 CLASS 30.

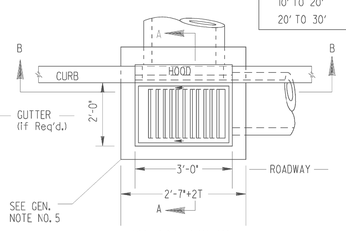
NOTE:
FRAME IS SAME AS GA. STD. 1010 OR CITY OF ATLANTA FRAME. TYPE B

SECTION C-C

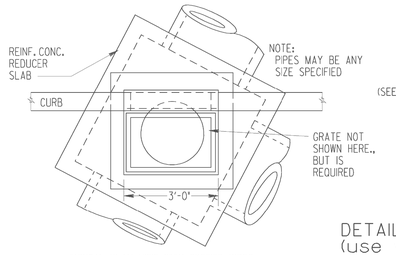


NOTE: HOOD IS SAME AS STD. 1019A HOOD.

DETAIL OF ✱HOOD (non-mountable) (use with Tp2 Curb)

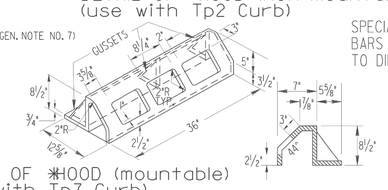


PLAN VIEW
SCALE : ½" = 1 FT.



TYPICAL PLAN VIEW WITH SKEWED PIPES

(SEE GEN. NOTE NO. 7)

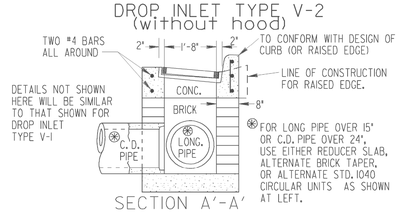


DETAIL OF ✱HOOD (mountable) (use with Tp7 Curb)

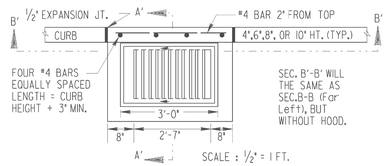
✱ CONTRACTOR SHALL SPECIFY EITHER MOUNTABLE OR NON-MOUNTABLE TO FOUNDRY IF HOOD IS REQUIRED.

SPECIAL NOTE:
BARS OF GRATE WILL BE PERPENDICULAR TO DIRECTION OF TRAFFIC FLOW.

DROP INLET TYPE V-2 (without hood)



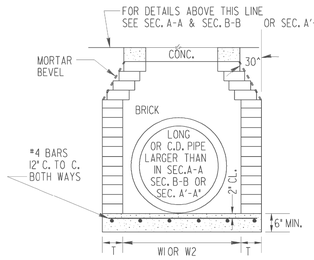
SECTION A'-A'



PLAN VIEW

GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD AND/OR SPECIAL PROVISIONS EXCEPT THAT VANE GRATE WILL BE GRAY IRON A.S.T.M. A-48 CLASS 30.
2. ALIGNMENT, NUMBER AND SIZES OF PIPES SHOWN ARE ONLY TYPICAL. SEE PLANS FOR ACTUAL PIPE CULVERT REQUIREMENTS.
3. SLOPE OF GRATE WILL MATCH GUTTER SLOPE WHEN USED WITH CURB AND GUTTER. SLOPE OF GRATE WILL MATCH ROADWAY SLOPE, WHERE THERE IS NO GUTTER (I.E., HEADER CURB, INTEGRAL CURB, ETC.). TOP OF HOOD WILL BE FLUSH WITH TOP OF CURB FOR TYPE V-1.
4. CONCRETE WILL BE CLASS "A" CONCRETE.
5. ½" EXPANSION JOINTS WILL BE REQUIRED IF RIGID PAVEMENT, SIDEWALK OR CONCRETE GUTTER MEETS DROP INLETS.
6. ALL STRUCTURES OVER 4 FT. DEEP SHALL REQUIRED STEPS OF A TYPE APPROVED BY THE MATERIALS LABORATORY OR ¾" DIA. BARS STEPS AS SHOWN FOR OTHER INLET TYPES. NUMBER AND LOCATION OF STEPS SHALL BE AS DIRECTED BY THE ENGINEER.
7. METAL HOODS DO NOT IMPROVE HYDRAULICS OF INLETS. TYPE V-1 DROP INLETS ARE NORMALLY USED TO PROVIDE CONTINUITY OF CURB OR TO ALLOW LARGER BOX WITHOUT TAPER OR REDUCER SLAB.

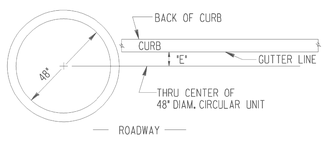


ALTERNATE-REDUCTION OF W1 OR W2 DIMENSIONS WITH BRICK MASONRY
SCALE : ½" = 1 FT.

MINIMUM H DIMENSIONS (FOR DETAIL AT LEFT)	
PIPE SIZE	H (MIN.)
18"	4'-2"
24"	4'-9"
30"	5'-9"
36"	6'-9"
42"	7'-10"
48"	8'-11"
54"	10'-0"
60"	11'-2"

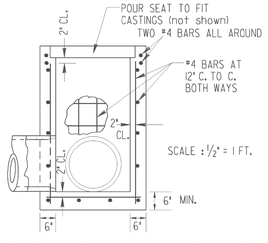
"E"= 8' FOR DROP INLET TYPE V-1
"E"=1'-0" FOR DROP INLET TYPE V-2

SEE STANDARD 1040 FOR ADDITIONAL DETAILS



NOTE: STD. 1040 ALTERNATE PERMITTED WITH ANY PIPE SIZE OR SKEW.

ALTERNATE - STANDARD 1040 CIRCULAR SECTIONS - PLAN VIEW LOCATION.
NO SCALE



ALTERNATE- CAST-IN-PLACE REINFORCED CONCRETE

	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
	REVISION	STANDARD DROP INLET TYPES V-1 AND V-2
		SCALE AS SHOWN — AUGUST, 1999
BY	DES. ____ DRW. ____ TRA. ____ CHK. ____	(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR. (APPROVED) CHIEF ENGINEER
		NUMBER 1019B

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	156	241

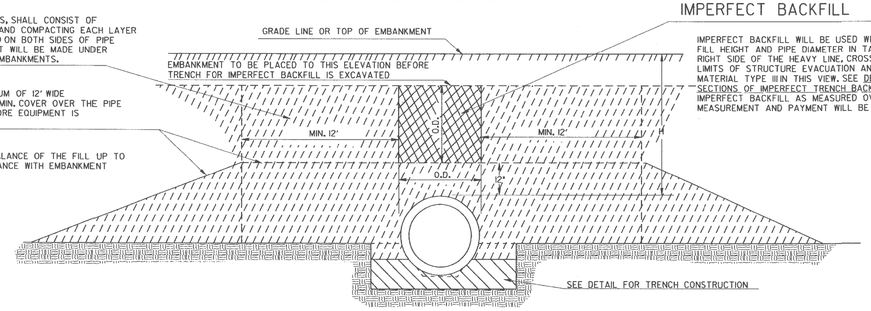
NORMAL BACKFILL

BACKFILL, AS SHOWN BY THE BROKEN LINE SECTIONS, SHALL CONSIST OF PLACING COMPACTABLE SOIL IN 6" (LOOSE) LAYERS AND COMPACTING EACH LAYER (ACCORDING TO GEORGIA STANDARD SPECIFICATIONS) ON BOTH SIDES OF PIPE FOR ITS FULL LENGTH. MEASUREMENT AND PAYMENT WILL BE MADE UNDER ROADWAY EXCAVATION ITEMS FOR FORMATION OF EMBANKMENTS.

NORMAL EMBANKMENT SHALL BE PLACED A MINIMUM OF 12' WIDE ON EACH SIDE OF THE PIPE AND AT LEAST THE MIN. COVER OVER THE PIPE AND COMPACTED TO THE REQUIRED DENSITY BEFORE EQUIPMENT IS ALLOWED TO CROSS.

AFTER BACKFILL HAS BEEN COMPACTED, THE BALANCE OF THE FILL UP TO GRADE LINE SHALL BE CONSTUCTED IN ACCORDANCE WITH EMBANKMENT SPECIFICATIONS

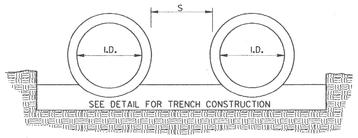
LONGITUDINAL SECTION OF IMPERFECT TRENCH BACKFILL AND BACKFILL METHODS



IMPERFECT BACKFILL

IMPERFECT BACKFILL WILL BE USED WITH CONCRETE PIPE IF FILL HEIGHT AND PIPE DIAMETER IN TABLE NO. 1 FALLS ON THE RIGHT SIDE OF THE HEAVY LINE. CROSS HATCHED AREA SHOWS LIMITS OF STRUCTURE EVACUATION AND IMPERFECT BACKFILL MATERIAL TYPE III IN THIS VIEW. SEE DETAILS BELOW CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL FOR LIMITS OF IMPERFECT BACKFILL AS MEASURED OVER THE PIPE LENGTHWISE. MEASUREMENT AND PAYMENT WILL BE CONFINED TO THESE LIMITS.

MULTIPLE PIPE CULVERT SPACING

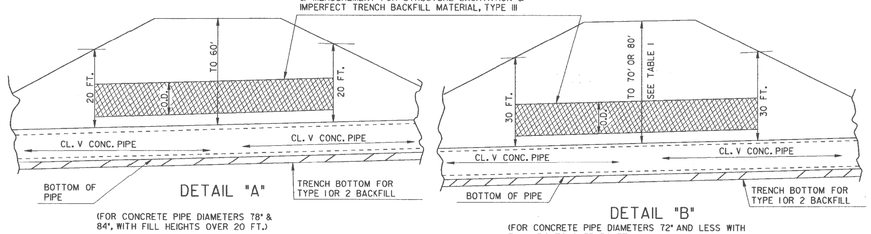


S=ONE INSIDE DIAMETER OF PIPE, OR 3 FEET, WHICHEVER IS SMALLER.
FOR PIPE ARCH CULVERTS, SUBSTITUTE SPAN FOR INSIDE DIAMETER.

NOTE:
FOR MULTIPLE LINES OF C.M. PIPE WITH METAL FLARED END SECTIONS, S MAY BE INCREASED ENOUGH TO AVOID OVERLAP OF END SECTION WINGTIPS. LOCATION OF METAL END SECTION SHOULD BE DETERMINED BEFORE PLACEMENT OF PIPE.

CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL

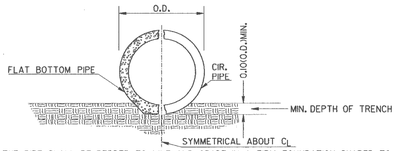
CROSS HATCHED AREAS SHOW LIMITS OF CONSTRUCTION & MEASUREMENT FOR STRUCTURE EXCAVATION & IMPERFECT TRENCH BACKFILL MATERIAL, TYPE III



DETAIL "A"
(FOR CONCRETE PIPE DIAMETERS 78" & 84", WITH FILL HEIGHTS OVER 20 FT.)

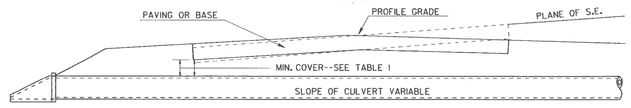
DETAIL "B"
(FOR CONCRETE PIPE DIAMETERS 72" AND LESS WITH FILL HEIGHTS OVER 30 FT.)

TRENCH CONSTRUCTION FOR SIDE DRAIN



NOTE: THE PIPE SHALL BE BEDDED TO LINE AND GRADE IN A FIRM FOUNDATION SHAPED TO FIT THE LOWER PART OF THE PIPE EXTERIOR. WHERE ROCK EXISTS, EXCAVATE AND BACKFILL WITH COMPRESSABLE MATERIAL (UNCLASSIFIED EXCAVATION) A MINIMUM OF 6" BELOW THE PIPE.

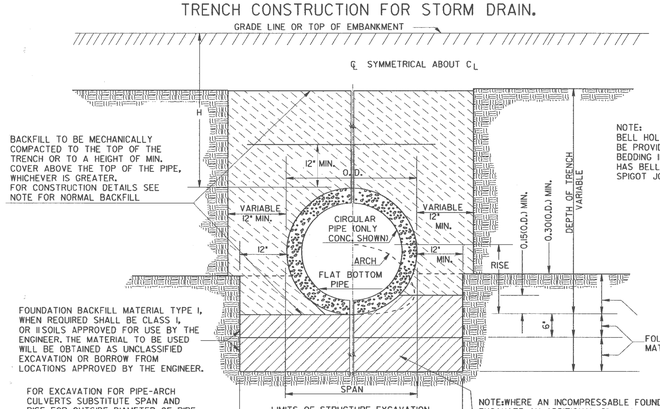
DETAIL SHOWING MINIMUM COVER FOR PIPE CULVERTS



NOTE:

1. FOR FILL HEIGHT TABLES SEE SHEET 2 OF 3 AND SHEET 3 OF 3.
2. ONLY ONE CLASS OR THICKNESS OF PIPE WILL BE SPECIFIED FOR EACH INDIVIDUAL LOCATION. THE CLASS OR THICKNESS WILL BE DETERMINED BY THE MAXIMUM HEIGHT OF FILL.

TRENCH CONSTRUCTION FOR STORM DRAIN.



BACKFILL TO BE MECHANICALLY COMPACTED TO THE TOP OF THE TRENCH OR TO A HEIGHT OF MIN. COVER ABOVE THE TOP OF THE PIPE, WHICHEVER IS GREATER. FOR CONSTRUCTION DETAILS SEE NOTE FOR NORMAL BACKFILL

NOTE:
BELL HOLES SHALL BE PROVIDED IN BEDDING IF PIPE HAS BELL AND SPIGOT JOINTS.

NOTE:
TRENCH CONSTRUCTION IS REQUIRED FOR BOTH NORMAL OR IMPERFECT BACKFILL. ALL PIPES WITH BELL & SPIGOT JOINTS SHALL HAVE BELL HOLES IN BEDDING.

FOUNDATION BACKFILL MATERIAL TYPE I, WHEN REQUIRED SHALL BE CLASS I, OR II SOILS APPROVED FOR USE BY THE ENGINEER. THE MATERIAL TO BE USED WILL BE OBTAINED AS UNCLASSIFIED EXCAVATION OR BORROW FROM LOCATIONS APPROVED BY THE ENGINEER.

FOR EXCAVATION FOR PIPE-ARCH CULVERTS SUBSTITUTE SPAN AND RISE FOR OUTSIDE DIAMETER OF PIPE IN HORIZONTAL AND VERTICAL DIMENSIONS SPECIFIED IN DETAIL.

NOTE: PIPE SHALL BE BEDDED IN A FOUNDATION SHAPED TO FIT THE LOWER PART OF PIPE EXTERIOR.

NOTE: WHERE AN INCOMPRESSABLE FOUNDATION EXISTS, EXCAVATE AN ADDITIONAL 6". WHERE AN UNSTABLE FOUNDATION MATERIAL IS ENCOUNTERED, EXCAVATE AN ADDITIONAL DEPTH AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER

REVISION	DATE	BY

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 1 OF 3
(TRENCH CONSTRUCTION, BEDDING, BACKFILLING)

NO SCALE — REV. & REDR.: SEPT., 2001

DES. ____ (SUBMITTED) James A. Bennett
DRW. ____ STATE ROAD & AIRPORT DESIGN ENGR.
TRA. ____ (APPROVED) Brad L. Ledbetter
CHK. ____ CHIEF ENGINEER

NUMBER 1030D

TABLE NO. 1 ROUND PIPE - CONCRETE - CORRUGATED STEEL - CORRUGATED ALUMINUM

MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM

PIPE DIAMETER (INCHES)	TYPE	MINIMUM COVER (INCHES)	HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE												PIPE DIAMETER (INCHES)
			1 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	
12	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		12
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075	
15	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		15
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.105	
18	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		18
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.105	.105	.105	.105	
24	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		24
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	
	ALUM 1	12	.060	.060	.060	.075	.075	.075	.075	.105	.105	.105	.105		
30	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		30
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	
	ALUM 1	12	.075	.075	.075	.075	.075	.105	.105	.105	.135	.135			
36	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		36
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	.138	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	
	ALUM 1	12	.075	.105	.105	.105	.105	.105	.135	.135	.135	.135			
	ALUM 2	12	.060	.060	.060	.060	.075	.075	.105	.105	.105	.135			
42	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		42
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.109	.138	
	ALUM 1	12	.105	.105	.135	.135	.164	.164							
	ALUM 2	12	.060	.060	.060	.075	.075	.105	.105	.105	.135	.135			
48	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		48
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	
	ALUM 1	12	.105	.105	.135	.164	.164	.164							
	ALUM 2	12	.060	.060	.060	.075	.075	.105	.105	.135	.135	.164	.164		
54	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		54
	STEEL 1	12	.079	.079	.079	.079	.079	.079	.079	.109	.138	.138	.168		
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168	
	ALUM 1	15	.105	.105	.135	.164	.164	.164							
	ALUM 2	15	.060	.060	.060	.075	.075	.105	.135	.135	.164	.164			
60	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V		60
	STEEL 1	12	.109	.109	.109	.109	.109	.109	.109	.109	.138	.168			
	STEEL 2	12	.064	.064	.064	.064	.064	.079	.079	.109	.138	.138	.168	.168	
	ALUM 1	15	.135	.135	.164	.164	.164	.164							
	ALUM 2	15	.060	.060	.075	.105	.105	.135	.135	.164	.164				
66	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V			66
	STEEL 1	12	.138	.138	.138	.138	.138	.138	.138	.138	.168	.168			
	STEEL 2	12	.064	.064	.064	.064	.064	.079	.109	.109	.138	.168	.168		
	ALUM 1	18	.164	.164	.164	.164	.164								
	ALUM 2	18	.075	.075	.105	.105	.135	.135	.164	.164					
72	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V			72
	STEEL 1	12	.138	.138	.138	.138	.138	.138	.138	.138	.168				
	STEEL 2	12	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168			
	ALUM 1	18	.164	.164	.164	.164	.164								
	ALUM 2	18	.075	.075	.105	.105	.135	.164	.164	.164					
78	CONCRETE	12	III	III	IV	V	V	V	V	V	V				78
	STEEL 1	15	.168	.168	.168	.168	.168	.168	.168	.168					
	STEEL 2	15	.064	.064	.064	.064	.079	.109	.109	.138	.168	.168			
	ALUM 2	21	.075	.075	.105	.105	.135	.164	.164						
84	CONCRETE	12	III	III	IV	V	V	V	V	V	V				84
	STEEL 1	15	.168	.168	.168	.168	.168	.168	.168	.168					
	STEEL 2	15	.064	.064	.064	.079	.079	.109	.109	.138	.168				
	ALUM 2	21	.105	.105	.105	.135	.135	.164	.164						
90	CONCRETE	12	III	III											90
	STEEL 2	18	.064	.064	.064	.079	.109	.109	.138	.138	.168				
	ALUM 2	24	.105	.105	.135	.135	.164								
96	CONCRETE	12	III	III											96
	STEEL 2	18	.079	.079	.079	.079	.109	.109	.138	.168					
	ALUM 2	24	.105	.105	.135	.135	.164								
102	CONCRETE	12	III	III											102
	STEEL 2	24	.079	.079	.079	.109	.109	.138	.138	.168					
	ALUM 2	24	.135	.164	.164										
108	CONCRETE	12	III	III											108
	STEEL 2	24	.109	.109	.109	.109	.109	.138	.138	.168					
	ALUM 2	24	.135	.164											
114	CONCRETE														114
	STEEL 2	24	.109	.109	.109	.109	.109	.138	.168						
	ALUM 2	24	.164	.164											
120	CONCRETE														120
	STEEL 2	24	.109	.109	.109	.109	.138	.138	.168						
	ALUM 2	24	.164	.164											

IMPERFECT BACKFILL IS NOT REQUIRED FOR CONDTIONS SHOWN ON THE LEFT SIDE OF THE HEAVY LINE. USE NORMAL BACKFILL.

FOR CONDITIONS TO THE RIGHT OF THE HEAVY LINE, CLASS V CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO DETAIL "A" OR "B" ON SHEET 1 OF 3.

TABLE NO.3-(INFORMATION ONLY)		
	COR. METAL THICKNESS	EQUIVALENT GAGE
STEEL	.064	16
	0.079	14
	0.109	12
	0.138	10
	0.168	8
ALUMINUM	0.060	16
	0.075	14
	0.105	12
	0.135	10
	0.164	8

STEEL 1 OR ALUM 1 DENOTES CORRUGATION PROFILE 2 2/3" X 1/2"

STEEL 2 OR ALUM 2 DENOTES CORRUGATION PROFILE 3" X 1" (OR 5" X 1" FOR STEEL PIPE ONLY)

ALL STEEL AND ALUMINUM PIPE SHALL BE LOCK-SEAM OR WELDED-SEAM (HELICAL) CONSTRUCTION.

MINIMUM COVER VALUES APPLY TO HS-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

TRENCH CONSTRUCTION IS REQUIRED FOR CONDITIONS ON BOTH SIDES OF HEAVY LINE. SEE SHEET 1 OF 3.

FOR CONDITIONS TO RIGHT OF HEAVY LINE, CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO SPECIFICATIONS AND THIS STANDARD.

TABLE VALUES FOR ALUMINUM CORRUGATED PIPE (OR ALUMINUM SPIRAL RIB PIPE) ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, fy=24,000 PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (fy=20,000 PSI), THE TABLE NO. 1 ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:

A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 INCHES BECOMES 13.8 INCHES)
B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FEET BECOMES 29.7-34.0 FEET)

	GEN. REV. NOTES	9-26-01
GJP	ADDED SEAM CONST. NOTE	3-9-99
BY	REVISION	DATE

NO SCALE

DES. ____ (SUBMITTED)
DRAWN ____
TRAC. ____
CHK. ____

STATE ____ (APPROVED)
CHIEF ENGINEER

OCTOBER 21, 1998

STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 2 OF 3
(FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)

NUMBER 1030D

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSAPP-0007-00(310)	157	241

TABLE NO. 1R ROUND PIPE - SPIRAL RIB STEEL - SPIRAL RIB ALUMINUM
MINIMUM THICKNESS OF STEEL AND ALUMINUM

PIPE DIAMETER (INCHES)	TYPE	MINIMUM COVER (INCHES)	HEIGHT OF FILL (FEET) ABOVE TOP OF PIPE												PIPE DIAMETER (INCHES)
			1 -10	10-15	15-20	20-25	25-30	30-35	35-40	40-50	50-60	60-70	70-80	80-90	
12															12
15															15
18	STEEL R	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079		18
	ALUM R	12	.060	.060	.060	.060	.060	.060	.075	.075					
24	STEEL R	12	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109		24
	ALUM R	12	.060	.060	.060	.060	.075	.075	.105	.105	.105				
30	STEEL R	12	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	.109		30
	ALUM R	15	.060	.060	.060	.075	.075	.105	.105	.105					
36	STEEL R	12	.064	.064	.064	.064	.064	.079	.079	.109	.109	.109			36
	ALUM R	18	.060	.060	.075	.075	.105	.105	.105	.135	.135				
42	STEEL R	12	.064	.064	.064	.064	.079	.079	.109	.109	.109				42
	ALUM R	21	.075	.075	.075	.105	.105	.105	.135	.135					
48	STEEL R	12	.064	.064	.064	.079	.079	.109	.109	.109					48
	ALUM R	24	.105	.105	.105	.105	.105	.135	.135						
54	STEEL R	15	.064	.064	.064	.079	.079	.109	.109						54
	ALUM R	24	.105	.105	.105	.105	.135	.135	.135						
60	STEEL R	15	.079	.079	.079	.079	.109	.109	.109						60
	ALUM R	24	.105	.105	.105	.105	.135	.135							
66	STEEL R	18	.079	.079	.079	.109	.109	.109	.109						66
	ALUM R	24	.135	.135	.135	.135	.135								
72	STEEL R	18	.109	.109	.109	.109	.109	.109							72
	ALUM R	27	.135	.135	.135	.135	.135								
78	STEEL R	21	.109	.109	.109	.109	.109								78
84	STEEL R	21	.109	.109	.109	.109	.109								84
90															90
96															96
102															102
108															108
114															114
120															120

R DENOTES SPIRAL RIB PROFILE 3/4" X 3/4" X 7-1/2"

TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, f_y=24,000 PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (f_y=20,000 PSI), ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:

A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 IN. BECOMES 13.8 IN.)

B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FT. BECOMES 29.7-34.0 FT.)

MINIMUM COVER VALUES APPLY TO HS-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
TRENCH CONSTRUCTION IS REQUIRED FOR ALL INSTALLATIONS.

BY	REVISION	DATE

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 3 OF 3
(FILL HEIGHTS FOR SPIRAL RIB METAL PIPE & FOR PIPE ARCH)

NO SCALE

DESIGNED
TRACED
CHECKED
REVISED

(SUBMITTED) STATE ROAD DESIGN ENGINEER
(APPROVED) CHIEF ENGINEER

SEPT., 2001

NUMBER 1030D

TABLE NO. 2 (PIPE-ARCH)

TABLE SHOWING MINIMUM THICKNESS IN INCHES OF CORRUGATED STEEL AND CORRUGATED ALUMINUM PIPE-ARCH AND MAXIMUM HEIGHTS OF FILL IN FEET ABOVE THE TOP OF THE PIPE-ARCH.

DIAMETER OF PIPE OF EQUAL PERIPHERY INCH	NOM.-MIN. SPAN INCH	NOM.-MIN. RISE INCH	MIN. THICKNESS (INCHES) COR. STEEL ①	COR. STEEL ②	COR. ALUMINUM	MIN. COVER (INCHES)	MAX. HT. FILL (FEET)
15	17	13	.064			18	13
					.060	18	15
18	21	15	.064			18	12
					.060	18	14
21	24	18	.064			18	10
					.060	18	13
24	28	20	.064			18	9
					.075	18	11
30	35	24	.064			18	9
					.075	18	9
36	42	29	.064			18	7
					.105	18	7
	40	31		.079		18	12
42	49	33	.079			18	7
					.105	18	7
	46	36	.079	.079		18	12
48	57	38	.109			18	7
					.135	18	7
	53	41		.079		18	12
54	64	43	.109			18	7
					.135	18	7
	60	46		.079		18	12
60	71	47	.138			18	7
					.164	18	7
	66	51		.079		18	12
66	77	52	.168			18	7
	73	55		.079		18	15
77	83	57	.168			18	8
	81	59		.079		18	15
78	87	63		.079		18	14
84	95	67		.109		18	12
90	103	71		.109		24	11

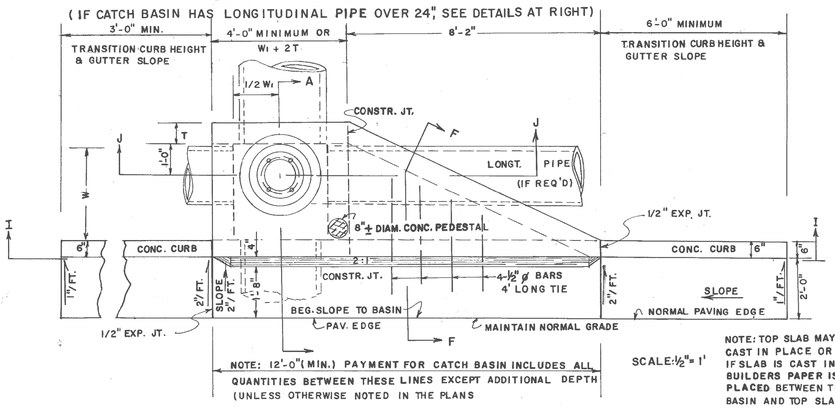
NOTE FOR TABLE NO. 2.
ALTERNATE SPAN-RISE COMBINATIONS FOR PIPE-ARCHES, HAVING EQUAL PERIPHERY TO THAT SHOWN, MAY BE SUBSTITUED IF LISTED IN AASHTO SPECIFICATION.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSNP-0007-00(310)	158	241

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	159	241

CATCH BASIN

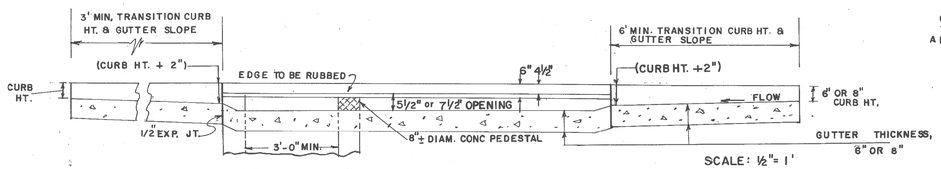
(IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT)



SCALE: 1/2" = 1'

NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST, IF SLAB IS CAST IN PLACE, BUILDERS PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.

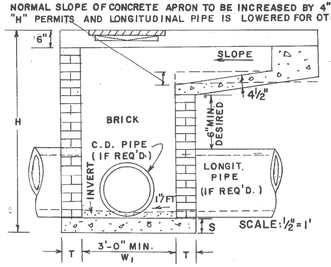
PLAN



SCALE: 1/2" = 1'

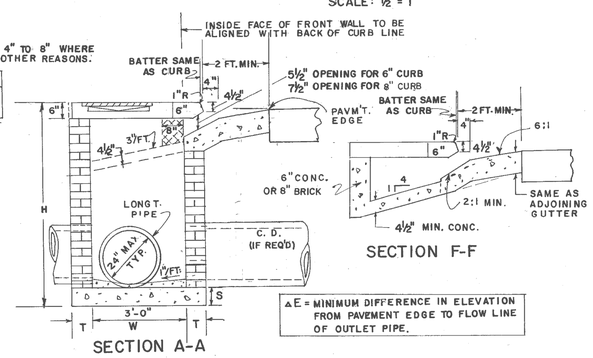
SECTION I-I

NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED BY 4" TO 8" WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS.



SCALE: 1/2" = 1'

SECTION J-J

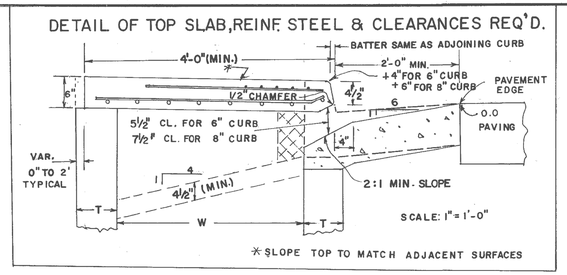


SECTION F-F

SECTION A-A

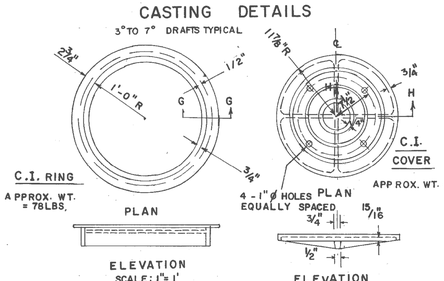
ΔE = MINIMUM DIFFERENCE IN ELEVATION FROM PAVEMENT EDGE TO FLOW LINE OF OUTLET PIPE.

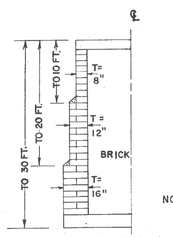
DETAIL OF TOP SLAB, REINF. STEEL & CLEARANCES REQ'D.



CASTING DETAILS

3° TO 7° DRAFTS TYPICAL

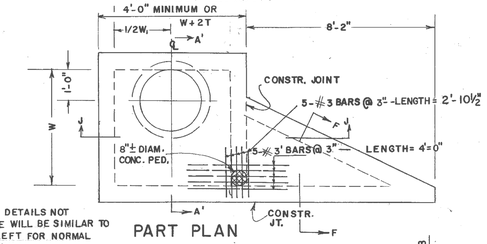




DEPTH LIMITS FOR INCREASING "T"

(TYPICAL FOR CATCH BASIN WITH LARGE LONGITUDINAL PIPE OR RECESSED BOX)

CATCH BASIN - (WITH PROTRUDED BACK)

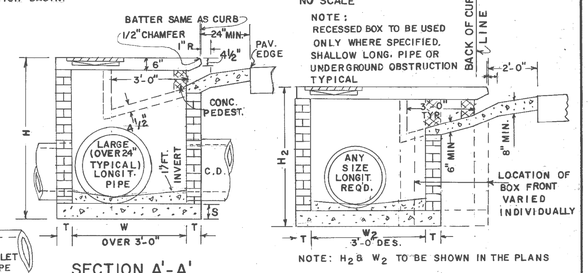


PART PLAN

NOTE: CATCH BASIN DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THOSE AT LEFT FOR NORMAL CATCH BASIN.

NO SCALE

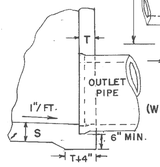
NOTE: RECESSED BOX TO BE USED ONLY WHERE SPECIFIED. SHALLOW LONG. PIPE OR UNDERGROUND OBSTRUCTION TYPICAL



SECTION A'-A' (WITH LARGE LONGITUDINAL PIPE)

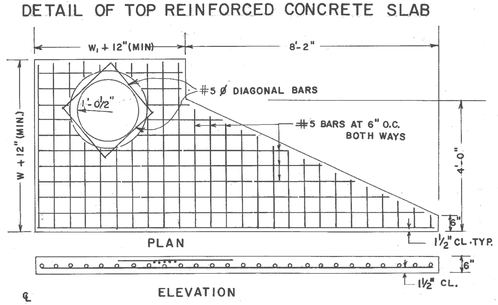
NOTE: H_2 & W_2 TO BE SHOWN IN THE PLANS

SECTION A'-A' (WITH RECESSED BOX)



ALTERNATE TO INVERT

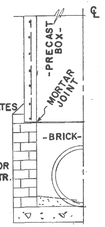
DETAIL OF TOP REINFORCED CONCRETE SLAB



PLAN

ELEVATION

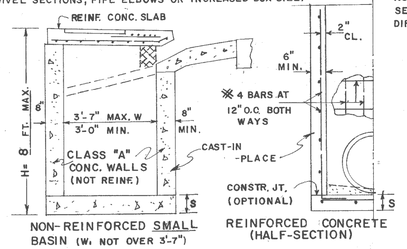
NOTE: PIPE SIZES, NUMBER, ALIGNMENT, AND INVERT SHOWN ARE ILLUSTRATIVE, SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONCRETE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE PLANS.



NOTE: SEE SEPARATE STDS. FOR PRECAST ALTERNATES. ADAPTERS (STD. 1040) WILL BE REQUIRED WITH CIRCULAR PRECAST UNITS. PRECAST BOX, CIRCULAR, AND/OR BUILT-IN-PLACE CONSTR. MAY BE USED IN COMBINATIONS.

PRECAST BOX ON BRICK (HALF-SECTION)

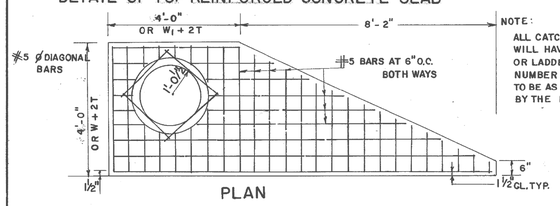
NOTE: TYPICAL TREATMENT FOR SKEWED PIPE ARE: CIRCULAR PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZE.



NON-REINFORCED SMALL BASIN (W1 NOT OVER 3'-7")

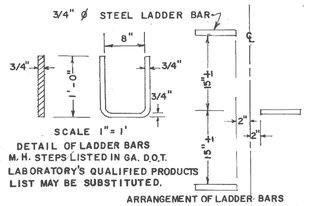
REINFORCED CONCRETE (HALF-SECTION)

DETAIL OF TOP REINFORCED CONCRETE SLAB



PLAN

NOTE: ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS, NUMBER & LOCATION TO BE AS DIRECTED BY THE ENGINEER.



SCALE 1" = 1'

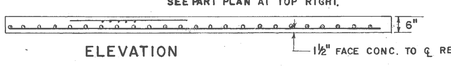
DETAIL OF LADDER BARS

NOTE: M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

ARRANGEMENT OF LADDER BARS

NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C.

NOTE: FOR PLAN DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB, SEE PART PLAN AT TOP RIGHT.



ELEVATION

W OR W1 (MAX.)	BOTTOM SLAB MATERIALS	S
TO 4'-6"	NON-REINF. CONCRETE	6"
	OR BRICK	8"
OVER 4'-6"	CONC. REINF. W1 #4 BARS 12" O.C. BOTH WAYS 2" CL FROM SLAB TOP	8"

TYPICAL MIN. DIMENSIONS			
PIPE DIA.	H (MIN.)	W or W1	ΔE (MIN)
12	4'-4"	3'-0"	3'-3"
15	4'-7"	3'-0"	3'-6"
18	4'-10"	3'-0"	3'-9"
24	5'-6"	3'-0"	4'-4"
30	6'-2"	3'-7"	5'-0"
36	6'-10"	4'-6"	5'-7"
42	7'-4"	5'-3"	5'-11"
48	8'-0"	6'-0"	6'-6"
54	8'-6"	6'-8"	7'-0"
60	9'-2"	7'-4"	7'-7"

NOTE: THE MIN. H & MIN. ΔE GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED IF CONDITIONS PERMIT WITH VARIED DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. W1 & W. DIMENSIONS DO NOT HAVE TO BE EQUAL.

CONSTRUCTION ALTERNATES

NOTE: DETAILS NOT SHOWN ABOVE FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO BRICK CATCH BASIN DETAILS.

SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD CATCH BASINS

FOR USE WITH CURB (6" HT. OR 8" HT.) & GUTTER

SCALE AS SHOWN — RED. & REDR. AUGUST, 1982

REV. & REDR. R.M.U. — TRA. G.M.E. — CHK. R.K.C.

(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR.

(APPROVED) STATE HIGHWAY ENGINEER

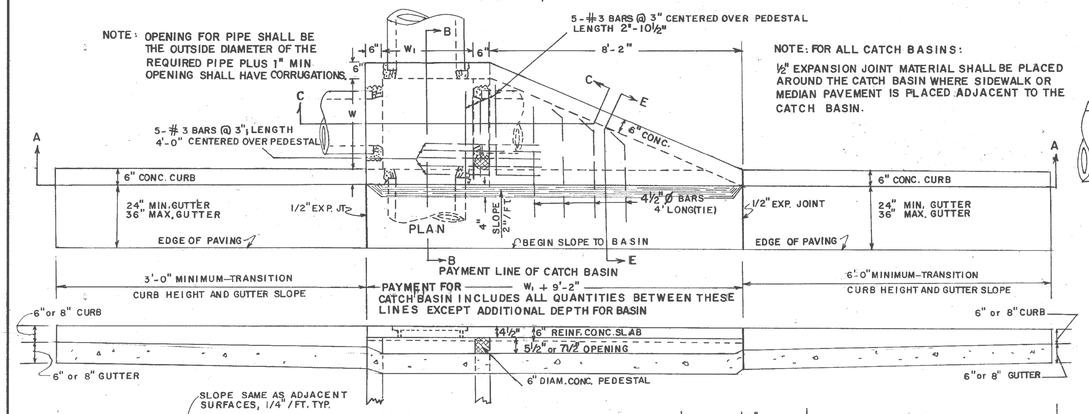
NUMBER 1033 D

FORM EF3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	160	241

CATCH BASIN (IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT.)

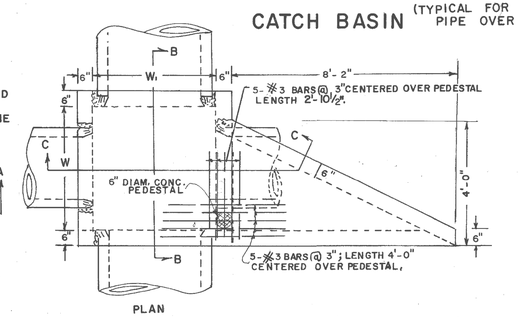
NOTE: OPENING FOR PIPE SHALL BE THE OUTSIDE DIAMETER OF THE REQUIRED PIPE PLUS 1" MIN. OPENING SHALL HAVE CORRUGATIONS.

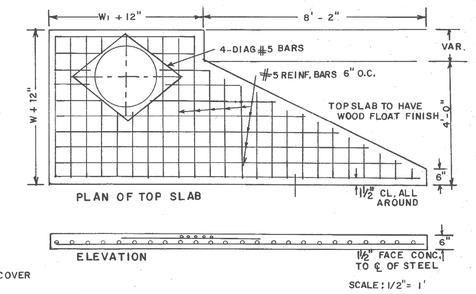


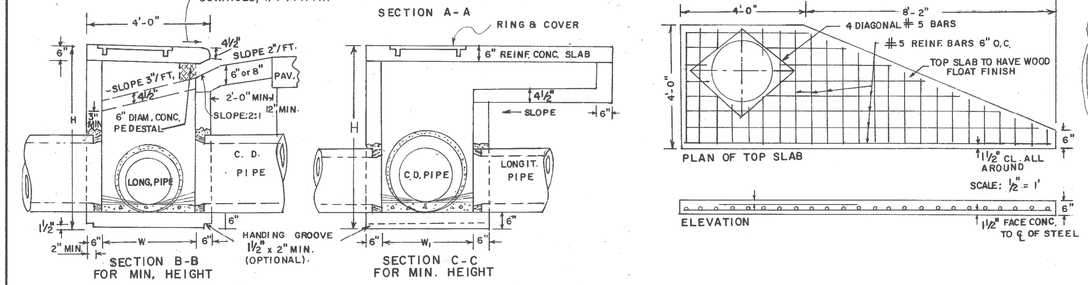
NOTE: FOR ALL CATCH BASINS:

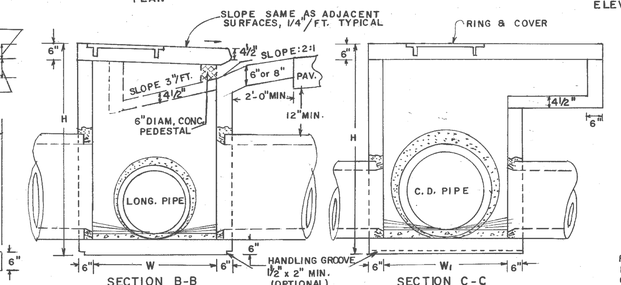
½" EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND THE CATCH BASIN WHERE SIDEWALK OR MEDIAN PAVEMENT IS PLACED ADJACENT TO THE CATCH BASIN.

CATCH BASIN (TYPICAL FOR CATCH BASIN WITH LONGITUDINAL PIPE OVER 24".)

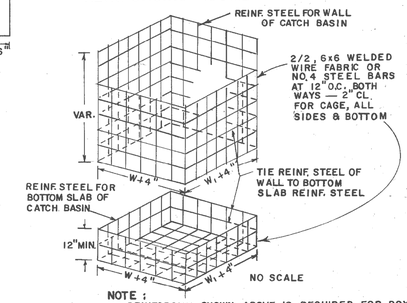




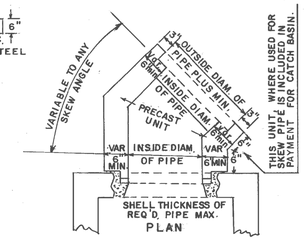




REINFORCING - ISOMETRIC VIEW



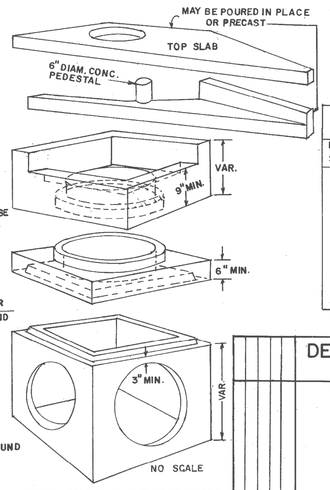
NOTE:
REINFORCING SHOWN ABOVE IS REQUIRED FOR BOX SHAPED BASIN. REINFORCING FOR CIRCULAR PRECAST ALTERNATE SHALL BE ACCORDING TO STD. 1040.



A METHOD OF CONNECTING SKEWED PIPE

IF THIS SWIVEL SECTION SLAB IS USED TO REDUCE THE W AND W1 DIMENSIONS, INCREASE THE MIN. THICKNESS TO 9" AND USE REINF. STEEL. SEE DETAIL BELOW.

TYPICAL ISOMETRIC VIEW



SWIVEL SECTION MAY BE USED WHERE SKEWED PIPE CONNECTS TO PRECAST CONCRETE BOX.

THE ABOVE VIEW DEPICTS PRECAST BOX. SEE SEPARATE STANDARDS FOR CIRCULAR ALTERNATE OR BUILT-IN-PLACE BOX.

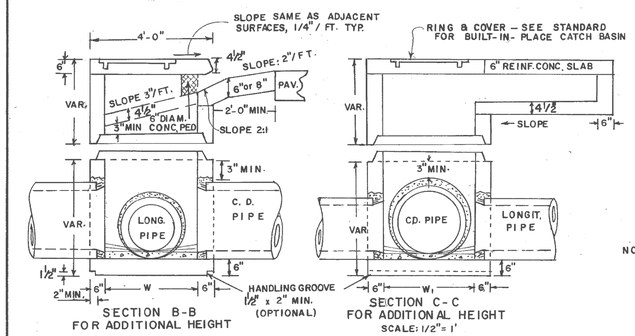
ALL JOINTS BETWEEN PRECAST RISERS OR BETWEEN PRECAST BASE AND RISER WILL BE KEYED. KEYED JOINTS SHOWN ARE TYPICAL AND MAY BE VARIED.

DIMENSIONS FOR CATCH BASINS		
PIPE SIZE	NORMAL W OR W1	MIN H
12"	3'-0"	4'-4"
15"	3'-0"	4'-7"
18"	3'-0"	4'-10"
24"	3'-0"	5'-6"
30"	3'-6"	6'-2"
36"	4'-0"	6'-10"
42"	5'-0"	7'-4"
48"	5'-0"	8'-0"
54"	6'-0"	8'-6"
60"	6'-0"	9'-2"

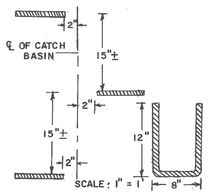
NOTE:
DIMENSIONS FOR CATCH BASINS ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPES AND MAY BE VARIED IF CONDITIONS PERMIT AND THE ENGINEER APPROVES. W & W1 DIMENSIONS DO NOT HAVE TO BE EQUAL.

ALTERNATE:
BUILT-IN-PLACE, PRECAST BOX, AND/OR PRECAST CIRCULAR UNITS WITH THE REQUIRED ADAPTERS, REDUCERS, FITTINGS, CONNECTIONS, ETC. MAY BE USED IN COMBINATIONS.

NOTE:
FOR RING & COVER DETAILS AND OTHER DETAILS NOT SHOWN, SEE STANDARD 1033D FOR BUILT-IN-PLACE CATCH BASIN.

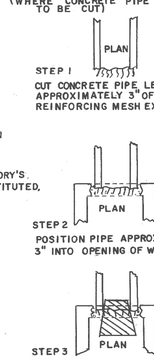


DETAIL AND ARRANGEMENT OF LADDER BARS

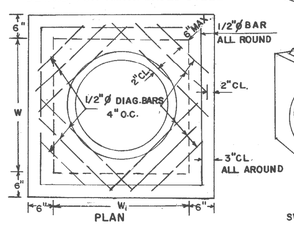


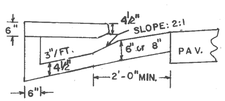
NOTE:
NUMBER AND LOCATION OF LADDER BARS IN CATCH BASIN TO BE AS DIRECTED BY THE ENGINEER.
M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

METHOD OF CONNECTING PIPE (WHERE CONCRETE PIPE HAS TO BE CUT)

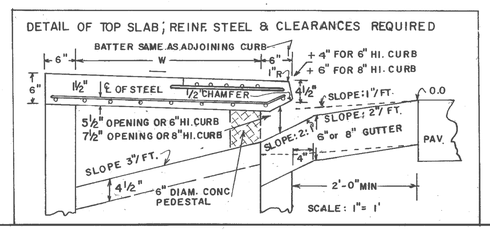


DETAIL FOR REINFORCED STEEL





DETAIL OF TOP SLAB; REINF. STEEL & CLEARANCES REQUIRED



DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD PRECAST CATCH BASINS

FOR USE WITH CURB (6" OR 8" HT.) & GUTTER

SCALE AS SHOWN — REV. & REDR., SEPT., 1982

REV. & REDR. RMU — (SUBMITTED) Floyd E. Hardy — STATE ROAD & AIRPORT DESIGN ENGR
TRA GME — (APPROVED) Thomas N. Marchandise — STATE HIGHWAY ENGINEER
CHK RKC

NUMBER 1033D PRECAST

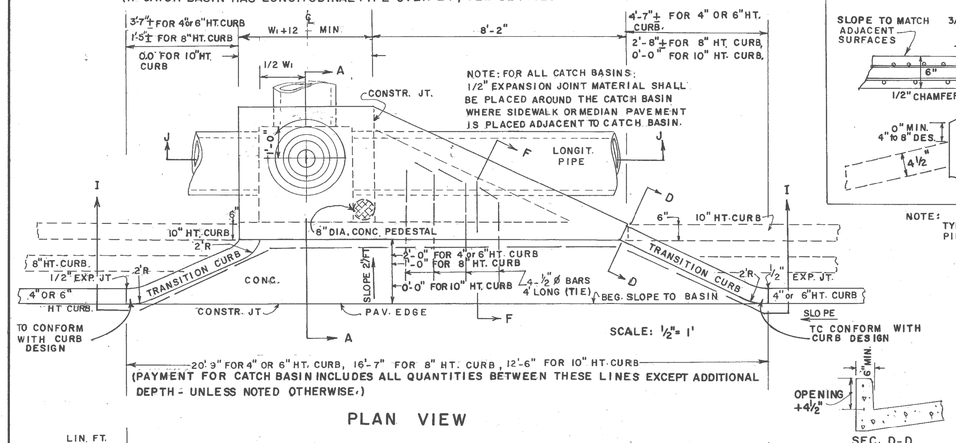
AF 21868

FORM EF3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	161	241

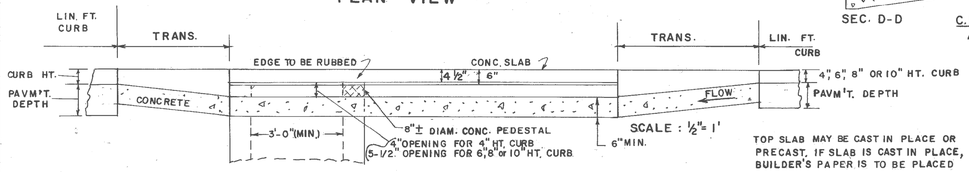
CATCH BASIN

(IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT)



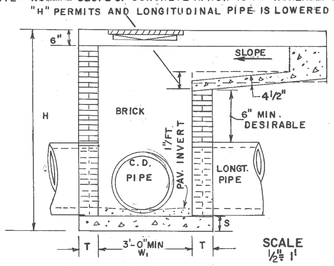
NOTE: FOR ALL CATCH BASINS; 1/2" EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND THE CATCH BASIN WHERE SIDEWALK OR MEDIAN PAVEMENT IS PLACED ADJACENT TO CATCH BASIN.

PLAN VIEW

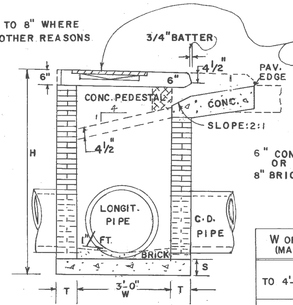


SECTION I-I

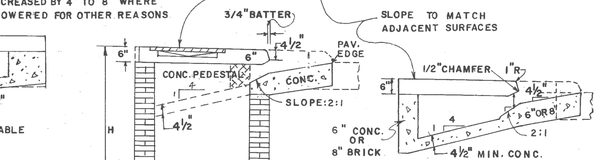
NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED BY 4" TO 8" WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS



SECTION J-J



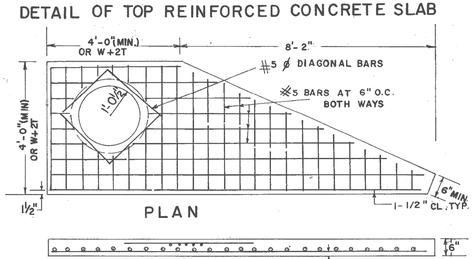
SECTION A-A



SECTION F-F

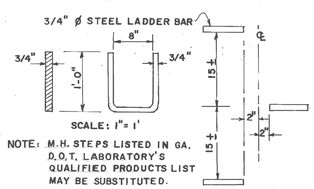
W OR W1 (MAX.)	BOTTOM SLAB	
	MATERIALS	S
TO 4'-6"	NON.-REINF. CONCRETE	6"
	OR BRICK	8"
OVER 4'-6"	CONC. REINF. W1 ⅜ 4 BARS 12" O.C. BOTH WAYS, 2" CL. FROM SLAB TOP	8"

DETAIL OF TOP REINFORCED CONCRETE SLAB



NOTE: ALL BARS IN PLAN VIEW ARE PLACED AT 6" O.C.

NOTE: FOR DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB SEE PART PLAN @ TOP RIGHT.

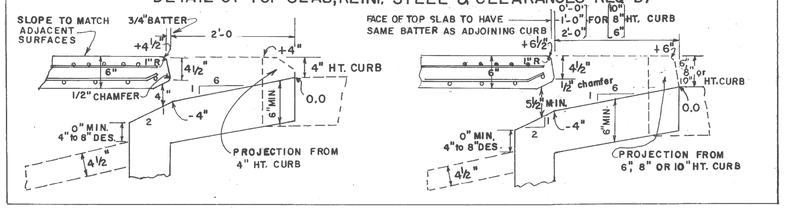


NOTE: M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS. NUMBER & LOCATION TO BE AS DIRECTED BY THE ENGINEER.

DETAIL OF LADDER BARS

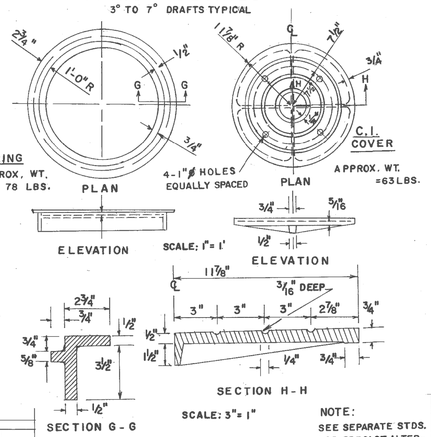
DETAIL OF TOP SLAB, REINF. STEEL & CLEARANCES REQ'D.

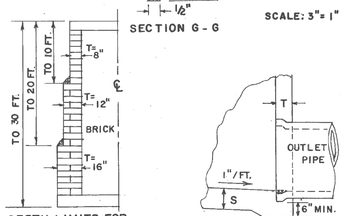


NOTE:
TYPICAL TREATMENTS FOR SKEWED PIPE ARE: CIRCULAR PRECAST UNITS; PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZES TO ACCOMODATE THE SKEW.

CASTING DETAILS

3° TO 7° DRAFTS TYPICAL





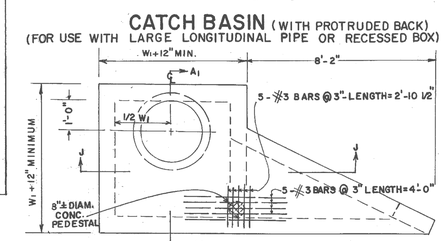
TYPICAL MAX. DIMENSIONS			
PIPE DIA.	H (MIN.)	W OR W1	Δ E
12	4'-4"	3'-0"	3'-1"
15	4'-7"	3'-0"	3'-4"
18	4'-10"	3'-0"	3'-7"
24	5'-6"	3'-0"	4'-2"
30	6'-2"	3'-7"	4'-10"
36	6'-10"	4'-6"	5'-3"
42	7'-4"	5'-3"	5'-9"
48	8'-0"	6'-0"	6'-4"
54	8'-6"	6'-8"	6'-10"
60	9'-2"	7'-4"	7'-5"

NOTE: THE MIN. H & MIN. ΔE GIVEN IN THE ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED, IF CONDITIONS PERMIT WITH THE VARIED DIMENSIONS SPECIFIED IN THE PLANS OR AS DIRECTED BY THE ENGINEER. W & W1 DIMENSIONS DO NOT HAVE TO BE EQUAL.

ΔE = MINIMUM DIFFERENCE IN ELEVATION FROM PAVEMENT EDGE TO FLOW LINE OF OUTLET PIPE.

CATCH BASIN (WITH PROTRUDED BACK)

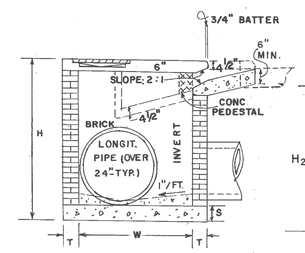
(FOR USE WITH LARGE LONGITUDINAL PIPE OR RECESSED BOX)



PART PLAN

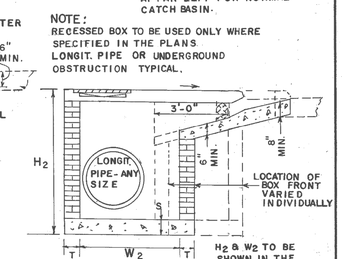
NOTE:
DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THESE AT FAR LEFT FOR NORMAL CATCH BASIN.

NOTE:
RECESSED BOX TO BE USED ONLY WHERE SPECIFIED IN THE PLANS. LONGIT. PIPE OR UNDERGROUND OBSTRUCTION TYPICAL.



SECTION A'-A'

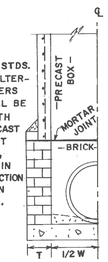
(FOR LARGE LONGITUDINAL PIPE)



SECTION A'-A'

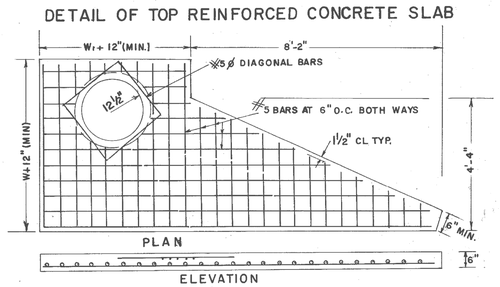
(FOR RECESSED BOX)

NOTE:
SEE SEPARATE STDS. FOR PRECAST ALTERNATES. ADAPTERS (STD. 1040.) WILL BE REQUIRED WITH CIRCULAR PRECAST UNITS. PRECAST BOX, CIRCULAR, AND/OR BUILT-IN PLACE CONSTRUCTION MAY BE USED IN COMBINATIONS.



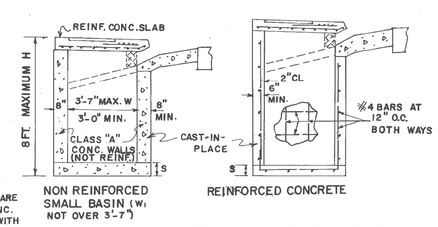
PRECAST BOX ON BRICK (HALF SECTION)

DETAIL OF TOP REINFORCED CONCRETE SLAB



NOTE:
PIPE SIZES, NUMBER, ALIGNMENT, & INVERTS SHOWN ARE ILLUSTRATIVE. SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONCRETE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE PLANS.

SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.



NON REINFORCED SMALL BASIN (W1 NOT OVER 3'-7")

REINFORCED CONCRETE

CONSTRUCTION ALTERNATES

NOTE: DETAILS NOT SHOWN ABOVE FOR CONCRETE CATCH BASINS WILL BE SIMILAR TO THOSE SHOWN FOR BRICK CATCH BASINS.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD

CATCH BASINS

FOR USE WITH HEADER OR INTEGRAL CURBS
4, 6", 8" & 10" HEIGHTS

SCALE AS SHOWN — REV. & REDR. AUGUST, 1982

REV. & REDR. R.M.U. TRA. G.M.E. CHK. R.K.C.

(SUBMITTED) Floyd E. Hassler — STATE ROAD & AIRPORT DESIGN ENGR.

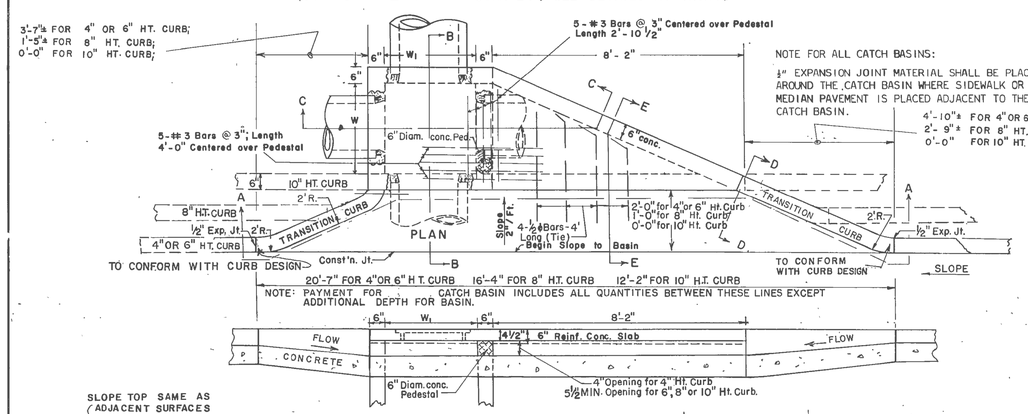
(APPROVED) Thomas D. Wheelchus — STATE HIGHWAY ENGINEER

NUMBER 1033F

FORM EF3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	162	241

CATCH BASIN (IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT)



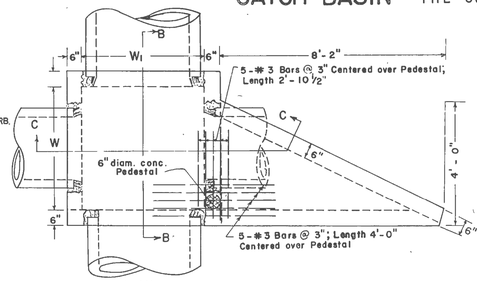
NOTE FOR ALL CATCH BASINS:

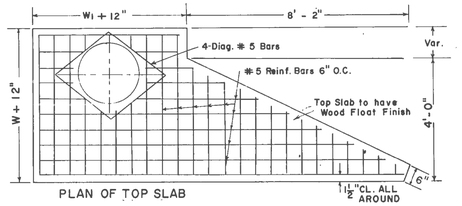
½" EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND THE CATCH BASIN WHERE SIDEWALK OR MEDIAN PAVEMENT IS PLACED ADJACENT TO THE CATCH BASIN.

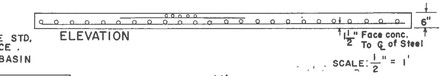
4'-10"± FOR 4" OR 6" HT. CURB.
2'-9"± FOR 8" HT. CURB.
0'-0" FOR 10" HT. CURB

SECTION A-A
SCALE: ½" = 1'

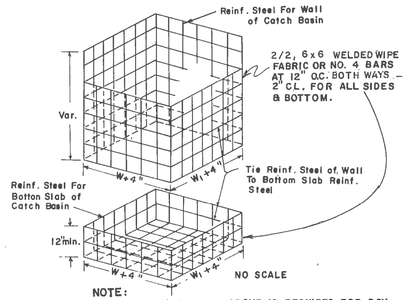
CATCH BASIN (TYPICAL FOR CATCH BASIN WITH LONGITUDINAL PIPE OVER 24")



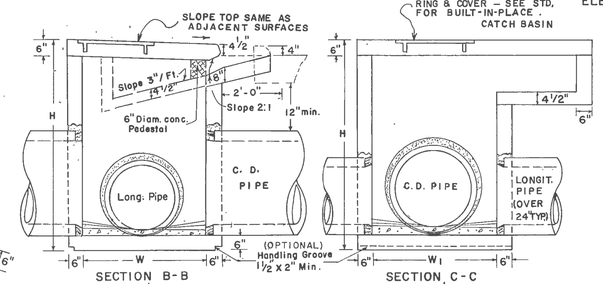




REINFORCING-ISOMETRIC VIEW

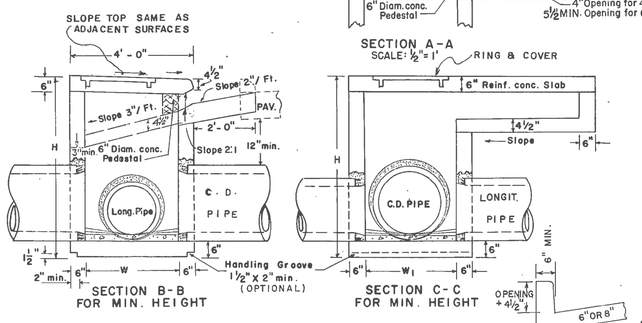


NOTE:
REINFORCING SHOWN ABOVE IS REQUIRED FOR BOX SHAPED BASIN. REINFORCING FOR CIRCULAR PRECAST ALTERNATE SHALL BE ACCORDING TO STD. 1040.



SECTION B-B
SCALE: ½" = 1'

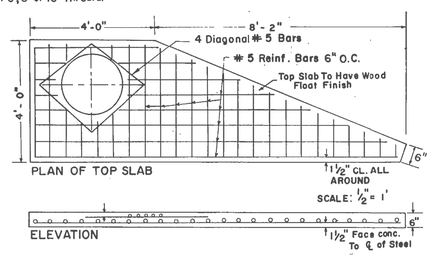
SECTION C-C
SCALE: ½" = 1'

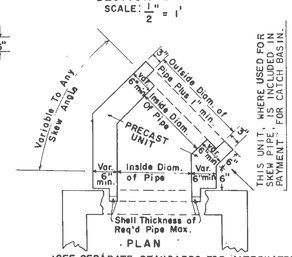


SECTION B-B
FOR MIN. HEIGHT

SECTION C-C
FOR MIN. HEIGHT

SEC. D-D

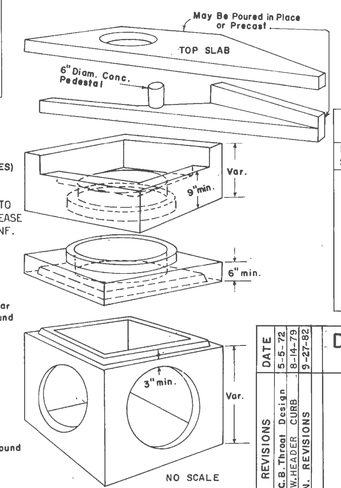




(SEE SEPARATE STANDARDS FOR ALTERNATES)
METHOD OF CONNECTING SKEWED PIPE

IF THIS SWIVEL SECTION SLAB IS USED TO REDUCE THE W AND W1 DIMENSIONS, INCREASE THE MIN. THICKNESS TO 9" AND USE REINF. STEEL. SEE DETAIL BELOW.

TYPICAL ISOMETRIC VIEW



SWIVEL SECTION MAY BE USED WHERE SKEWED PIPE CONNECTS TO PRECAST CONCRETE BOX.

NOTE:
THE ABOVE VIEW DEPICTS PRECAST BOX. SEE SEPARATE STANDARDS FOR CIRCULAR ALTERNATE OR BUILT-IN-PLACE BOX.

ALL JOINTS BETWEEN PRECAST RISERS OR BETWEEN PRECAST BASE AND RISER WILL BE KEYED. KEYED JOINTS SHOWN ARE TYPICAL AND MAY BE VARIED.

DIMENSIONS FOR CATCH BASINS		
PIPE SIZE	NORMAL W OR W1	MIN. H
12"	3'-0"	4'-4"
15"	3'-0"	4'-7"
18"	3'-0"	4'-10"
24"	3'-0"	5'-6"
30"	3'-6"	6'-2"
36"	4'-0"	6'-10"
42"	5'-0"	7'-4"
48"	5'-0"	8'-0"
54"	6'-0"	8'-6"
60"	6'-0"	9'-2"

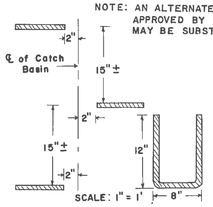
NOTE:
DIMENSIONS FOR CATCH BASINS ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPES AND MAY BE VARIED IF CONDITIONS PERMIT AND THE ENGINEER APPROVES. W & W1 DIMENSIONS DO NOT HAVE TO BE EQUAL.

ALTERNATE:
BUILT-IN-PLACE, PRECAST BOX AND/OR PRECAST CIRCULAR UNITS WITH THE REQUIRED ADAPTERS REDUCERS, FITTINGS, CONNECTIONS, ETC. MAY BE USED IN COMBINATIONS.

NOTE:
FOR RING & COVER DETAILS AND OTHER DETAILS NOT SHOWN, SEE STANDARD 1033F FOR BUILT-IN-PLACE CATCH BASIN.

DETAIL AND ARRANGEMENT OF LADDER BARS

NOTE: AN ALTERNATE TYPE STEP APPROVED BY THE LABORATORY MAY BE SUBSTITUTED.

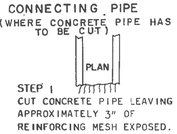


NOTE:
NUMBER AND LOCATION OF LADDER BARS IN CATCH BASIN TO BE AS DIRECTED BY THE ENGINEER.

ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS.

METHOD OF CONNECTING PIPE

(WHERE CONCRETE PIPE HAS TO BE CUT)



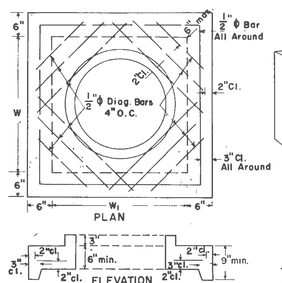
STEP 1
CUT CONCRETE PIPE LEAVING APPROXIMATELY 3" OF REINFORCING MESH EXPOSED.

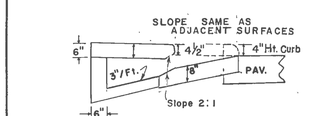
STEP 2
POSITION PIPE APPROXIMATELY 3" INTO OPENING OF WALL.

STEP 3
POSITION CONICAL CORE INSIDE OF PIPE AND SEAL WITH GROUT (1/2" MIN. THICKNESS OF GROUT) REMOVE CORE WHEN SET AND RUB GROUT TO SEAL JOINTS.

NO SCALE

DETAIL FOR REINFORCED STEEL

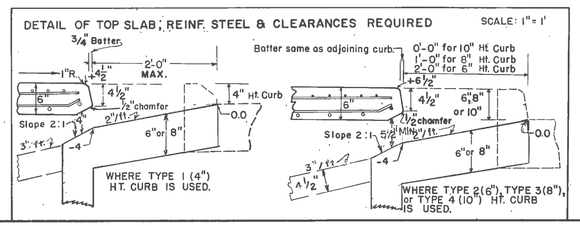




SECTION E-E
SCALE: ½" = 1'

DETAIL OF TOP SLAB, REINF. STEEL & CLEARANCES REQUIRED

SCALE: 1" = 1'



Dietzgen N. O. 135 "Imperial"

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

REVISIONS			DATE
R.M.U.	Rev. C.B. Throat Design		5-5-72
R.M.U.	USE W/HEADER CURB		8-14-73
R.M.U.	GEN. REVISIONS		9-27-82

STANDARD
PRECAST CATCH BASINS
FOR USE WITH HEADER OR INTEGRAL CURBS
4", 6", 8" OR 10" HEIGHTS

SCALE AS SHOWN

FEB., 1967

DESIGNED
DRAWN RWH
TRACED AVS
CHECKED RBS

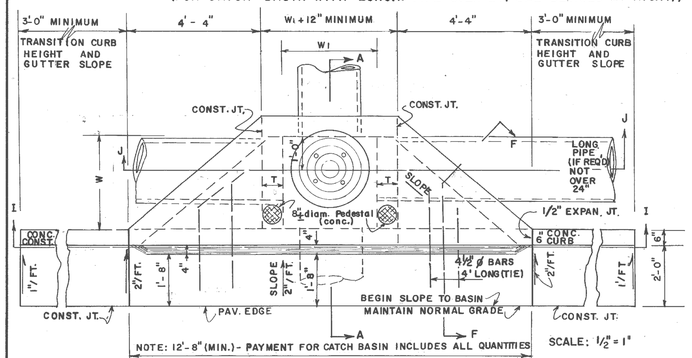
SUBMITTED — STATE ROAD DESIGN ENGINEER
APPROVED — STATE HIGHWAY ENGINEER

NUMBER 1033F PRECAST

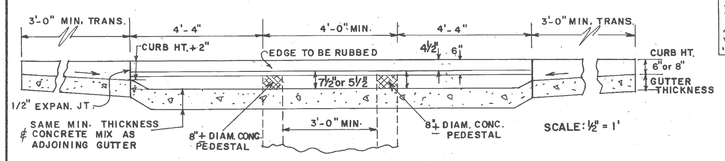
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	163	241

CATCH BASIN

(FOR CATCH BASIN WITH LONGIT. PIPE OVER 24", SEE DETAILS AT RIGHT.)

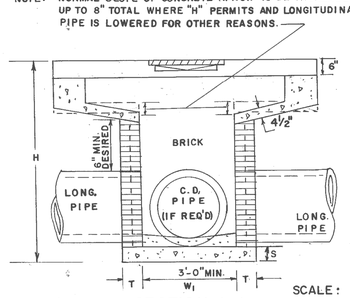


NOTE: 12'-8" (MIN.) - PAYMENT FOR CATCH BASIN INCLUDES ALL QUANTITIES BETWEEN THESE LINES EXCEPT ADDITIONAL DEPTH FOR BASIN (UNLESS OTHERWISE NOTED IN THE PLANS)

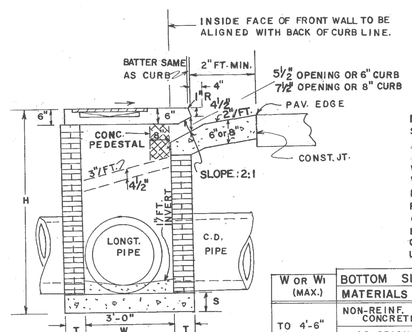


SECTION I-I

NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED UP TO 8" TOTAL WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS.



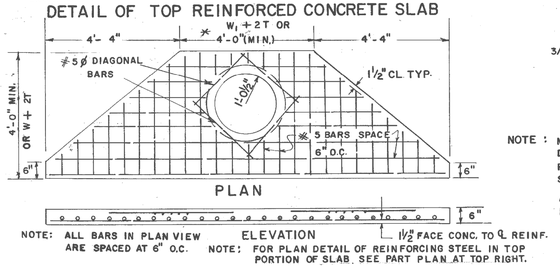
SECTION J-J



SECTION A-A

NOTE: PIPE SIZES, NUMBER, ALIGNMENT AND INVERTS SHOWN ARE ILLUSTRATIVE. SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONC. AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

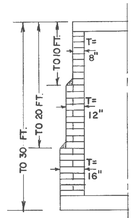
DETAIL OF TOP REINFORCED CONCRETE SLAB



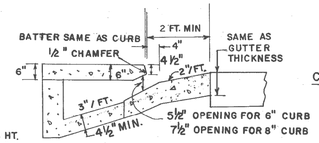
NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C.

NOTE: FOR PLAN DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB, SEE PART PLAN AT TOP RIGHT.

NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF CAST IN PLACE, BUILDER'S PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.



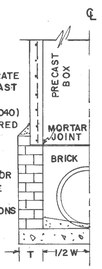
DEPTH LIMITS FOR INCREASING "T"



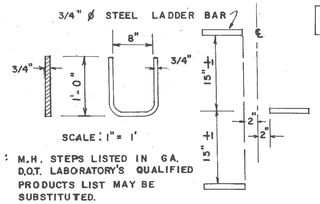
SECTION F-F

W or W1 (MAX.)	BOTTOM SLAB MATERIALS	"S"
TO 4'-6"	NON-REINF. CONCRETE	6"
	OR BRICK	8"
OVER 4'-6"	CONC. REINF. W1 4 BARS 12" O.C. BOTH WAYS 2" CL. FROM SLAB TOP	8"

NOTE: SEE SEPARATE STDS. FOR PRECAST ALTERNATES, ADAPTERS (STD. 1040) WILL BE REQUIRED WITH CIRCULAR PRECAST UNITS. PRECAST BOX, CIRCULAR, AND/OR BUILT-IN-PLACE CONSTR. MAY BE USED IN COMBINATIONS



PRECAST BOX ON BRICK (HALF-SECTION)

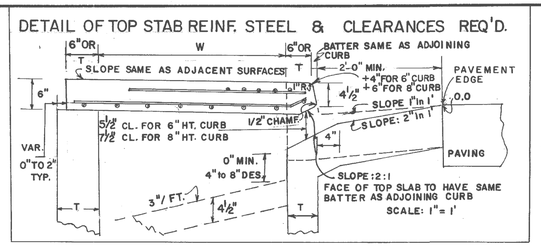


NOTE: M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS. NUMBER & LOCATION TO BE AS DIRECTED BY THE ENGINEER.

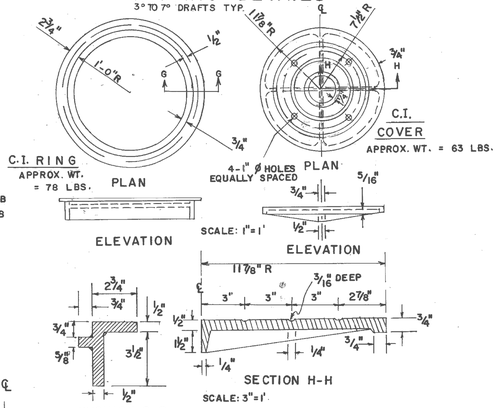
DETAIL OF LADDER BARS

DETAIL OF TOP STAB REINF. STEEL & CLEARANCES REQ'D.

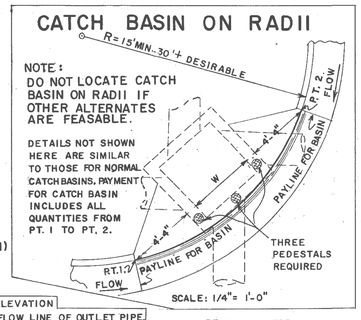


CASTING DETAILS

3° TO 7° DRAFTS TYP.



CATCH BASIN ON RADII



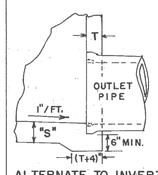
NOTE: DO NOT LOCATE CATCH BASIN ON RADII IF OTHER ALTERNATES ARE FEASIBLE.

DETAILS NOT SHOWN HERE ARE SIMILAR TO THOSE FOR NORMAL CATCH BASINS. PAYMENT FOR CATCH BASIN INCLUDES ALL QUANTITIES FROM PT. 1 TO PT. 2.

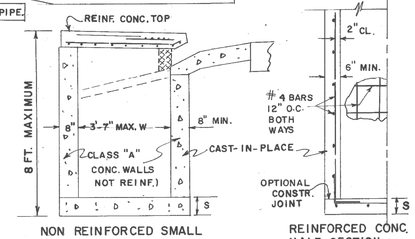
ΔE = MINIMUM DIFFERENCE IN ELEVATION FROM PAVEMENT EDGE TO FLOW LINE OF OUTLET PIPE.

TYPICAL MIN. DIMENSIONS			
PIPE DIA.	H (MIN.)	W or W1	MIN. ΔE
12	4'-4"	3'-0"	3'-3"
15	4'-7"	3'-0"	3'-6"
18	4'-10"	3'-0"	3'-9"
24	5'-6"	3'-0"	4'-4"
30	6'-2"	3'-7"	5'-0"
36	6'-10"	4'-6"	5'-7"
42	7'-4"	5'-3"	5'-11"
48	8'-0"	6'-0"	6'-6"
54	8'-6"	6'-8"	7'-0"
60	9'-2"	7'-4"	7'-7"

NOTE: THE MIN. H & MIN. ΔE GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED, IF CONDITIONS PERMIT WITH VARIED DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. W & W1 DIMENSIONS DO NOT HAVE TO BE EQUAL.



ALTERNATE TO INVERT



NON REINFORCED SMALL BASIN (W1 NOT OVER 3'-7")

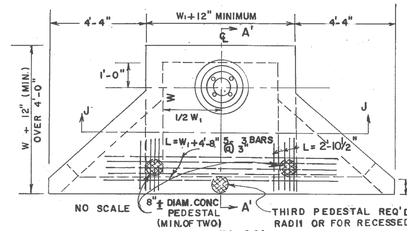
REINFORCED CONC. HALF-SECTION

NOTE: **CONSTRUCTION ALTERNATES**

DETAILS NOT SHOWN ABOVE FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO BRICK CATCH BASIN DETAILS.

CATCH BASIN (WITH PROTUDED BACK)

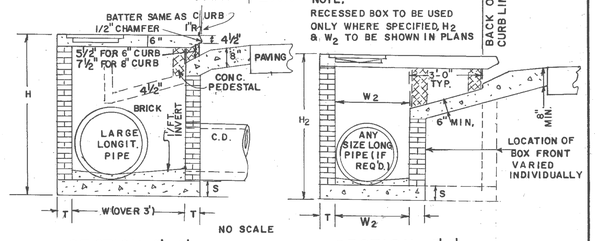
FOR USE WITH LONGITUDINAL PIPE OVER 24" OR FOR USE WITH RECESSED BOX



NOTE: DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THOSE AT FAR LEFT FOR NORMAL CATCH BASINS.

PART PLAN

NOTE: RECESSED BOX TO BE USED ONLY WHERE SPECIFIED. H2 & W2 TO BE SHOWN IN PLANS



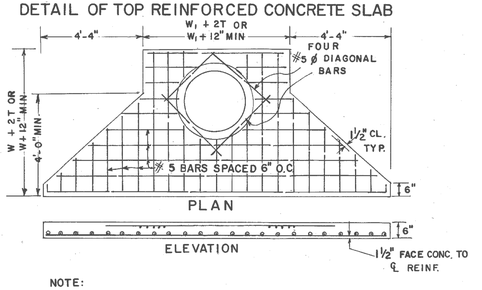
SECTION A'-A'

(FOR LONGIT. PIPE OVER 24")

SECTION A'-A'

(FOR RECESSED BOX)

DETAIL OF TOP REINFORCED CONCRETE SLAB



NOTE: TYPICAL TREATMENT FOR SKEWED PIPES ARE: CIRCULAR PRECAST UNITS; PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZES TO ACCOMODATE THE SKEWS.

SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD CATCH BASINS

FOR USE WITH CURB (6" OR 8" HT.) & GUTTER (IN SAGS OR LOW POINTS)

SCALE AS SHOWN — REV. & RED. AUGUST, 1982

REV. & REDR. R.M.U. — TRA. G.M.E. — CHK. R.K.C.

(SUBMITTED) Floyd E. Hardy — STATE ROAD & AIRPORT DESIGN ENGR.

(APPROVED) Thomas D. Mitchell — STATE HIGHWAY ENGINEER

NUMBER 1034D

FORM EF3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	164	241

CATCH BASIN (IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT)

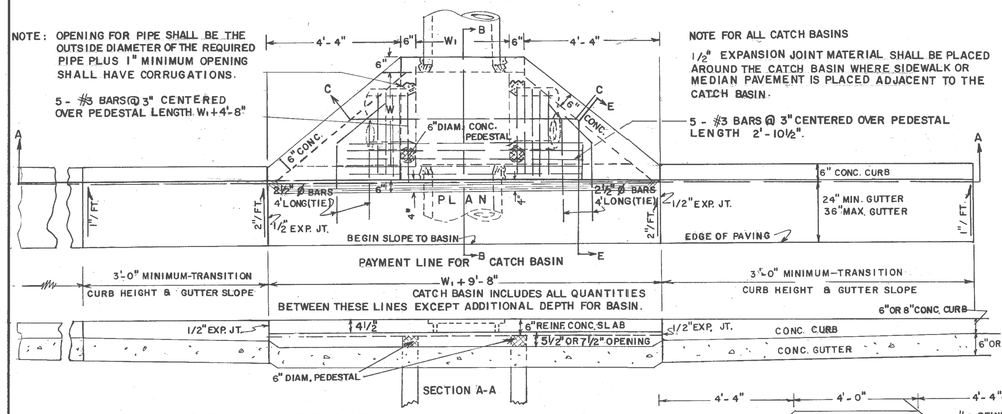
NOTE: OPENING FOR PIPE SHALL BE THE OUTSIDE DIAMETER OF THE REQUIRED PIPE PLUS 1" MINIMUM OPENING SHALL HAVE CORRUGATIONS.

5 - #3 BARS @ 3" CENTERED OVER PEDESTAL LENGTH W_1+4'-8"

NOTE FOR ALL CATCH BASINS

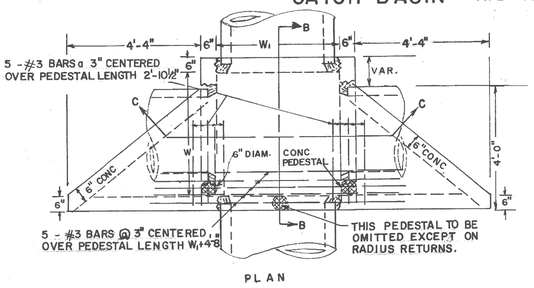
1½" EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND THE CATCH BASIN WHERE SIDEWALK OR MEDIAN PAVEMENT IS PLACED ADJACENT TO THE CATCH BASIN.

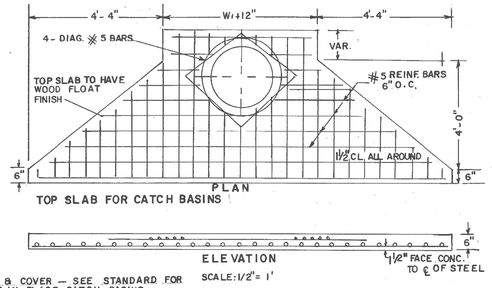
5 - #3 BARS @ 3" CENTERED OVER PEDESTAL LENGTH 2'-10½".

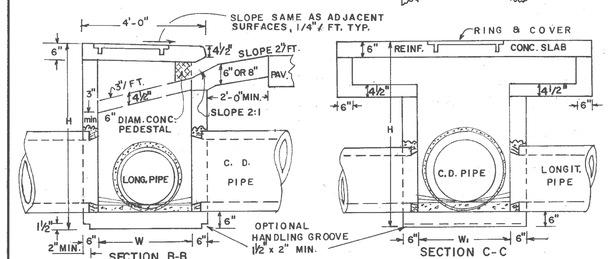


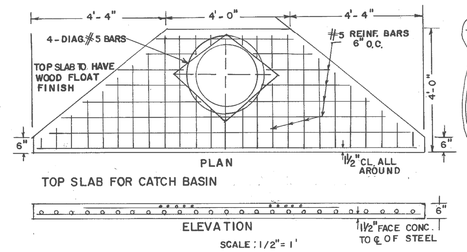
CATCH BASIN (TYPICAL FOR CATCH BASIN WITH LONGITUDINAL PIPE OVER 24".)

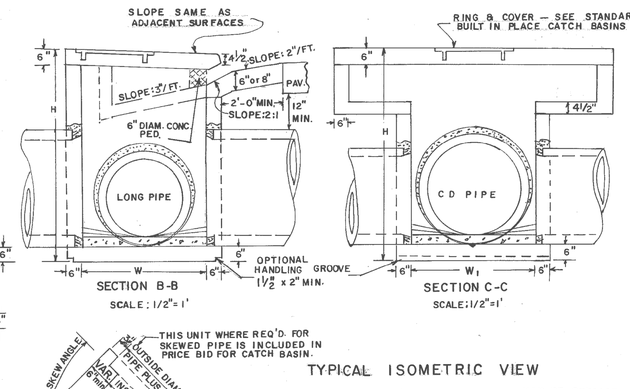
5 - #3 BARS @ 3" CENTERED OVER PEDESTAL LENGTH 2'-10½"



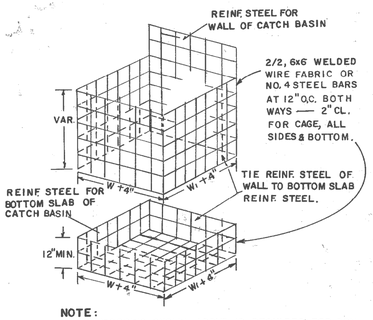




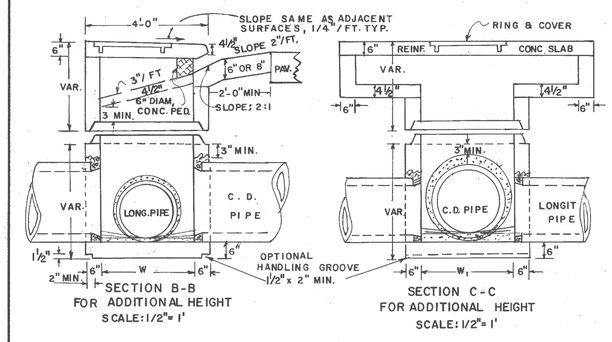




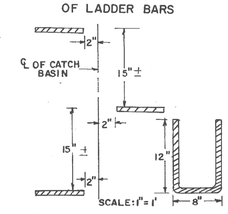
REINFORCING - ISOMETRIC VIEW



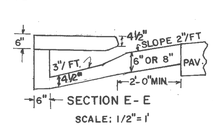
NOTE:
REINFORCING SHOWN ABOVE IS REQUIRED FOR BOX SHAPED BASIN. REINFORCING FOR CIRCULAR PRECAST ALTERNATE SHALL BE ACCORDING TO STD. 1040.



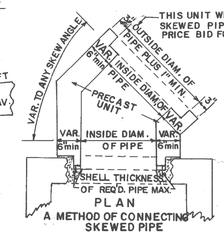
DETAIL AND ARRANGEMENT OF LADDER BARS



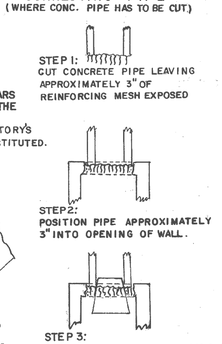
NOTE:
NUMBER AND LOCATION OF LADDER BARS IN CATCH BASIN TO BE AS DIRECTED BY THE ENGINEER.
M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.



THIS UNIT WHERE REQ'D. FOR SKEWED PIPE IS INCLUDED IN PRICE BID FOR CATCH BASIN.

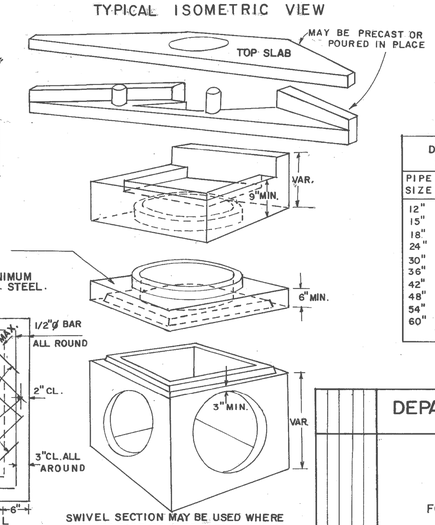


METHOD OF CONNECTING PIPE (WHERE CONC. PIPE HAS TO BE CUT)



NO SCALE

TYPICAL ISOMETRIC VIEW



ALL JOINTS BETWEEN PRECAST RISERS OR BETWEEN PRECAST BASE AND RISER WILL BE KEYED. KEYED JOINTS SHOWN ARE TYPICAL AND MAY BE VARIED.

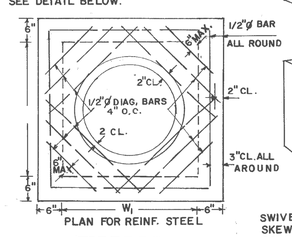
DIMENSIONS FOR CATCH BASINS		
PIPE SIZE	NORMAL W or W_1	MIN. H
12"	3'-0"	4'-4"
15"	3'-0"	4'-7"
18"	3'-0"	4'-10"
24"	3'-0"	5'-6"
30"	3'-6"	6'-2"
36"	4'-0"	6'-10"
42"	5'-0"	7'-4"
48"	5'-0"	8'-0"
54"	6'-0"	8'-6"
60"	6'-0"	9'-2"

NOTE:
DIMENSIONS FOR CATCH BASINS ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPES AND MAY BE VARIED IF CONDITIONS PERMIT AND THE ENGINEER APPROVES. W & W_1 DIMENSIONS DO NOT HAVE TO BE EQUAL.

ALTERNATE:
BUILT-IN-PLACE, PRECAST BOX, AND/OR PRECAST CIRCULAR UNITS WITH THE REQUIRED ADAPTERS, REDUCERS, FITTINGS, CONNECTIONS ETC. MAY BE USED IN COMBINATIONS.

NOTE:
FOR RING & COVER DETAILS AND OTHER DETAILS NOT SHOWN, SEE STANDARD. 1034 D FOR BUILT-IN-PLACE CATCH BASIN.

IF THIS SWIVEL SECTION SLAB IS USED TO REDUCE THE W AND W_1 DIMENSIONS, INCREASE THE MINIMUM THICKNESS TO 9" AND USE REINF. STEEL. SEE DETAIL BELOW.

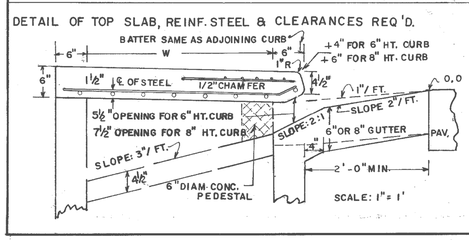


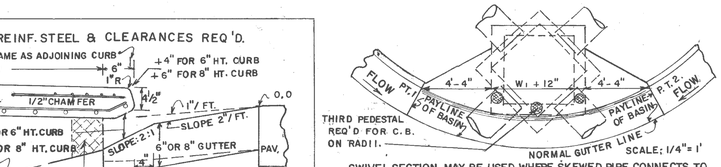
SWIVEL SECTION MAY BE USED WHERE SKEWED PIPE CONNECTS TO PRECAST CONCRETE BOX.

NO SCALE

NOTE:
THE ABOVE VIEW DEPICTS PRECAST BOX SEE SEPARATE STANDARDS FOR CIRCULAR ALTERNATE OR BUILT-IN-PLACE BOX.

DETAIL OF TOP SLAB, REINF. STEEL & CLEARANCES REQ'D.





SWIVEL SECTION MAY BE USED WHERE SKEWED PIPE CONNECTS TO PRECAST CONCRETE BOX.
ALL DIMENSIONS ARE THE SAME AS SHOWN ON DETAILS FOR CATCH BASIN, DIMENSIONS FROM PT. 1 TO PT. 2 ARE MEASURED ALONG THE CHORD, UNIT PRICE BID FOR CATCH BASIN INCLUDES ALL CURB AND GUTTER FROM PT. 1 TO PT. 2.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD PRECAST CATCH BASINS

FOR USE WITH CURB (6" OR 8" HT.) & GUTTER (IN SAGS OR LOW POINTS)

SCALE AS SHOWN — REV. & REDR., SEPT. 1982

REV. & REDR. R.M.U.
TRA. G.M.E.
CHK. R.K.C.

(SUBMITTED) Floyd E. Hardy — STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) Thomas D. Moreland — STATE HIGHWAY ENGINEER

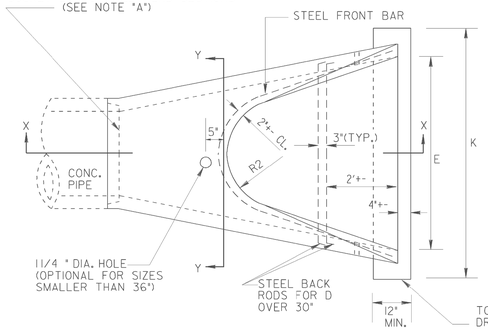
NUMBER 1034D PRECAST

FORM EF3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	165	241

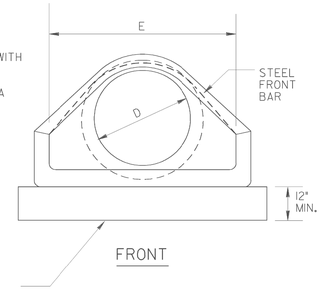
CONCRETE FLARED END SECTION

END SECTION TO PIPE JOINT SHOWN AS TYPICAL:
HUB END ON OUTLET END SECTIONS;
SOCKET END ON INLET END SECTIONS
(SEE NOTE "A")



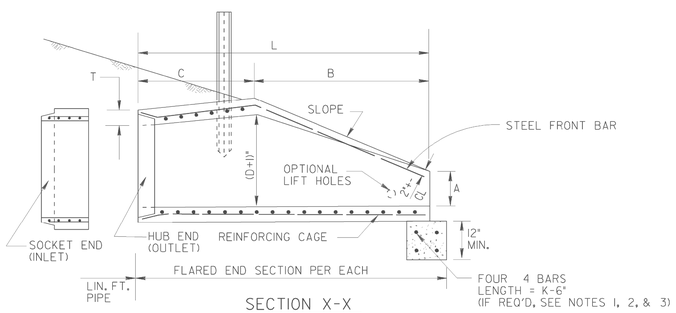
PLAN

INSTALLATION: (D OVER 30") CABLE, CHAIN, OR LIFTING PIN WILL EXTEND THRU 1 1/4" HOLE WITH A PLATE OR REBAR CONNECTED INSIDE THE CONC. SECTION TO PROVIDE ADEQUATE BEARING AREA OR A LIFTING ASSEMBLY DEVICE MAY BE USED TO GIVE 3 LIFT POINTS. HOOKS CONNECTED DIRECTLY TO CONCRETE IS NOT PERMITTED. DAMAGE FROM IMPROPER HANDLING SHALL BE CAUSE FOR REJECTION.

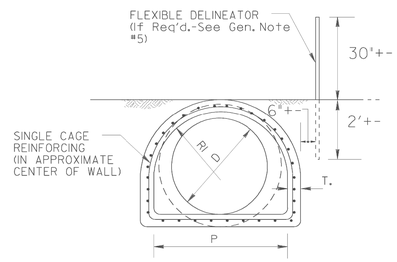


FRONT

NOTE: DO NOT CUT CONCRETE PIPE. USE FULL LENGTH SECTIONS ONLY. WARP SLOPE TO CONFORM WITH PIPE LENGTH AND END SECTION.



SECTION X-X



SECTION Y-Y

REINFORCING CAGE:

(1.) WIRE FABRIC HAVING EQUAL STEEL AREA AS INNER CAGE FOR CLASS II PIPE, AASHTO M-170.
(2.) ALTERNATE: # 3 BARS SPACED 12"+ LONGITUDINALLY WITH # 2 BARS TRANVERSELY AT 6' O.C. MAX. SPACING, SPOT WELDED OR TIED TO FORM CAGE. (BACK RODS MAY BE OMITTED.)

NOTE "A":

CONTRACTOR WILL INFORM PRODUCER IF CONCRETE FLARED END SECTION IS FOR INLET OR FOR OUTLET END. SOCKET (TONGUE OR SPIGOT) END IS REQUIRED FOR INLETS. HUB (GROOVE OR BELL) END IS REQUIRED FOR OUTLETS. SOCKET TO SOCKET OR HUB TO HUB JOINT WILL NOT BE ACCEPTED UNLESS A REINFORCED CONCRETE COLLAR IS BUILT AROUND THE JOINT WITH NO PAYMENT BEING MADE FOR THE COLLAR.

FLARED END SECTIONS SHALL BE JOINTED TO PIPE WITH ALL SPACE IN THE JOINT FILLED WITH EITHER BITUMINOUS PLASTIC CEMENT OR PREFORMED PLASTIC GASKET (SEC. 848).

WALL THICKNESS (T) IS SHOWN AS NOMINAL AND MAY BE INCREASED AT PRODUCER'S OPTION FOR DESIRED JOINT DESIGN OR TO ALLOW A FLAT OUTSIDE BOTTOM ON THE FLARE, WITH INSIDE DIMENSIONS OF FLARE RETAINED AS SHOWN.

T = PIPE WALL THICKNESS (0.0833D + 1"+- TYPICAL)

DIMENSIONS AND REINFORCING FOR CONCRETE FLARED END SECTIONS (+- 1" TOLERANCE)

PIPE DIA	FRONT BAR	BACK RODS	SLOPE +-	A	B	C *	L *	E	P	R1	R2	K= E + 2'	OUTLET TOEWALL (IF REQ'D) CU.YDS. CONC.
12"	1-#3 x 5' 4"	NOT REQ'D.	2.2:1	4"	2'0"	4' 1"	6'1"	2'0"	1'8"	10"	9"	4'-0"	.148
15"	1-#3 x 6' 0"	NOT REQ'D.	2.2:1	6"	2'3"	3'10"	6'1"	2'6"	2'0"	1'0"	11"	4'-6"	.167
18"	1-#3 x 7' 2"	NOT REQ'D.	2.2:1	9"	2'3"	3'10"	6'1"	3'0"	2'5"	1'4"	1'0"	5'-0"	.185
24"	1-#3 x 9' 10"	NOT REQ'D.	2.4:1	10"	3'8"	2' 6"	6'2"	4'0"	2'9"	1'5"	1'2"	6'-0"	.222
30"	1-#4 x 11' 8"	NOT REQ'D.	2.4:1	12"	4'6"	1' 8"	6'2"	5'0"	3'1"	1'6"	1'3"	7'-0"	.259
36"	1-#4 x 13' 10"	2-#4 x 6'3"	2.4:1	15"	5'3"	2'11"	8'2"	6'0"	4'0"	2'0"	1'8"	8'-0"	.296
42"	1-#4 x 13' 10"	2-#4 x 7'4"	2.4:1	21"	5'3"	2'11"	8'2"	6'6"	4'6"	2'4"	1'10"	8'-6"	.315

NOTE: SPECIFIED REINFORCING IS MINIMAL AND MAY BE INCREASED AT PRODUCERS OPTION TO AID CASTING & HANDLING. ALTERNATE REINFORCEMENT PERMITTED IF APPROVED.

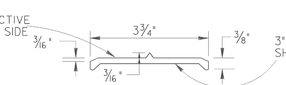
* NOTE: "C" AND "L" DIMENSION MAY BE MEASURED TO EITHER END OF JOINT CONNECTION AT PIPE.

SPECIAL NOTE:
FLARED END SECTIONS ARE NORMALLY LIMITED TO USE OUTSIDE THE CLEAR ZONE OR BEHIND BARRIER AND WHERE HYDRAULICS PERMIT. SEE OTHER STANDARDS OR DETAILS FOR TAPERED HEADWALLS, SAFETY SLOPE END SECTIONS OR OTHER PIPE END STRUCTURES.

GENERAL NOTES :

1. TOEWALLS ARE REQ'D. FOR OUTLETS OF CONC. STORM DRAINS, EXCEPT WHERE DITCH PAVING OR OTHER EROSION PROTECTION IS PROVIDED OR WHERE THE OUTLET VELOCITY IS LESS THAN 8 FT/SEC. TOEWALLS ARE NOT REQUIRED FOR SIDE DRAINS, SLOPE DRAINS OR INLETS OF STORM DRAINS THIS CRITERIA MAY BE VARIED WHERE SPECIFIED BY THE DESIGNER OR THE ENGINEER.
2. TOEWALLS WILL BE PAID FOR AS CU. YDS. OF CLASS "A" OR "B" CONCRETE. CONTRACTOR MAY ELECT TO CONSTRUCT TOE WALL WITH SAND CEMENT BAG RIPRAP OR STONE RIPRAP TO SAME MINIMUM DIMENSIONS WITH NO ADDITIONAL PAYMENT.
3. PRECAST TOEWALLS SHALL BE CL. "A" CONCRETE; CAST-IN-PLACE TOEWALLS MAY BE CL "A" OR "B" CONCRETE AND MAY BE TRENCH FORMED. WHERE PLANS ITEMIZE ONE CLASS OF CONCRETE AND CONTRACTOR ELECTS TO USE OTHER CLASS, NO ADDITIONAL PAYMENT IS MADE. NO PAYMENT IS MADE FOR STEEL IN TOEWALL.
4. CENTERLINE OF FLARED END SECTION WILL ALIGN WITH CENTERLINE OF PIPE, IF PIPE IS SKEWED, THE EMBANKMENT SLOPE WILL BE WARPED TO CONFORM WITH END SECTION.
5. FLEXIBLE DELINEATORS SHALL BE REQUIRED AT CROSS DRAIN FLARED END SECTIONS, BOTH INLET AND OUTLET. PAYMENT FOR FLARED END SECTION WILL INCLUDE DELINEATORS, SEE DETAIL AND NOTES BELOW. DELINEATORS NOT REQ'D. FOR SIDE DRAIN, SLOPE DRAIN, OR LONG PIPE.

1" X 12" LONG YELLOW REFLECTIVE SHEETING TYPE IX, ON EACH SIDE OF RIDGE.



3" X 12" LONG YELLOW REFLECTIVE SHEETING TYPE IX.

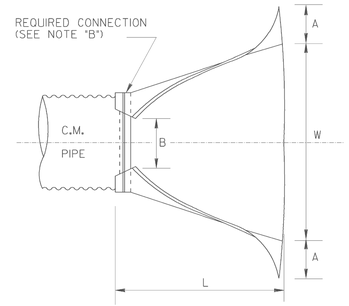
DELINEATOR POST SECTION (TYP.)

NOTE:
DELINEATOR POST SHALL CONFORM TO SEC. 911 FOR FLEXIBLE DELINEATOR POST EXCEPT REFLECTIVE SHEETING IS NOT REQUIRED AND LENGTH IS 4'-6" FROM TOP TO BOTTOM POINT. ALTERNATES PERMITTED IF APPROVED BY D.O.T. LABORATORY.

SPECIAL NOTE :
PIPE SIZES (D) ARE "NOMINAL-MINIMUM" INSIDE DIAMETERS IN ACCORDANCE WITH GEORGIA STANDARD FOR PIPE CULVERTS. "D" DIMENSION FOR FLARED END SECTION SHALL EQUAL THE "D" DIMENSION FOR CONNECTING PIPE CULVERT.

METAL FLARED END SECTION

(USE ONLY WITH COR. METAL PIPE)



PLAN

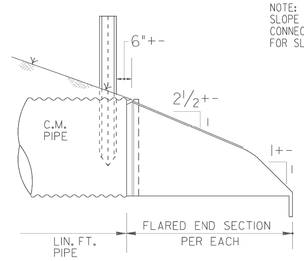
NOTE: GALVANIZED STEEL FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED STEEL PIPE AND ALUMINUM FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED ALUMINUM PIPE UNLESS OTHERWISE APPROVED BY D.O.T. OFFICE OF MATERIALS AND TESTS.

FLARED END SECTION DIMENSIONS

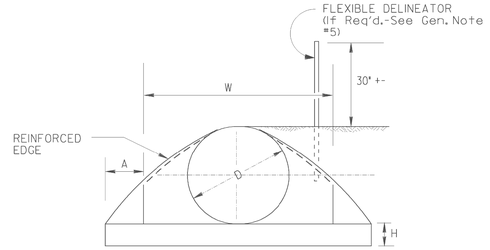
PIPE SIZE "D"	THICKNESS GALV. STEEL	THICKNESS ALUM.	A A= 0.4D +- 1"	B B=0.5 D +- 1"	H H=0.25D +- 1" (MIN.6")	L L=1.67D +- 1 1/2"	W W=2.0D +- 2"
12"	.064"	.060"	5"	6"	6"	1'8"	2'0"
15"	.064"	.060"	6"	7"	6"	2'3"	2'6"
18"	.064"	.060"	7"	9"	6"	2'6"	3'0"
24"	.064"	.060"	9"	1'0"	6"	3'4"	4'0"
30"	.079"	.105"	1'0"	1'3"	7"	4'2"	5'0"
36"	.079"	.105"	1'2"	1'6"	9"	5'0"	6'0"
42"	.109"	.164"	1'5"	1'9"	10"	5'10"	7'0"

NOTE: WHERE METAL FLARED END SECTIONS ARE USED WITH MULTIPLE PIPE LINES, THE STANDARD SPACING BETWEEN PIPES (S=D OR 3 FT.) MAY HAVE TO BE INCREASED (S=1.75 D TYPICAL). TO PREVENT OVERLAP OF END SECTION WINGTIPS. SEE ALSO STD. 1030D.

NOTE:
SLOPE DRAIN PIPES WILL REQUIRE AN ELBOW FOR CONNECTION TO THE FLARED END SECTION. PAYMENT FOR SLOPE DRAIN PIPE WILL INCLUDE THIS ELBOW.



SIDE



FRONT

NOTE "B":

THE CONNECTION BETWEEN METAL FLARED END SECTION AND C.M. PIPE WILL BE ONE OF THE FOLLOWING:

(a) A STRAP BAND OR THREADED ROD PROVIDED BY THE MANUFACTURER WILL LOCK END SECTION ONTO PIPE. A CORRUGATION AT THE PIPE AND WILL BE NON-SPIRALED (PERPENDICULAR TO CL OF PIPE)

(b) A DIMPLE BAND COLLAR WILL BE SHOP BOLTED TO END SECTION. PIPE WILL BE INSERTED INTO BAND COLLAR TO MEET THE END SECTION.

(c) A STUB PIPE WILL BE RIVITED TO THE END SECTION AND THE MAIN PIPE CONNECTED TO THE STUB WITH A NORMAL CONNECTING BAND.

(d) OTHER TYPE CONNECTION IF RECOMMENDED BY MANUFACTURER AND APPROVED BY THE D.O.T.

REV. REFLECTIVE SHEETING	REVISION	6-9-06	DATE
GLO	BY		

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
FLARED END SECTIONS
FOR PIPES

NO SCALE — REV. & REDR. SEPT., 1999

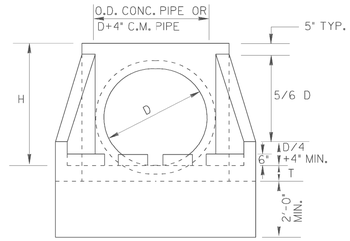
DES. ____ REV. ____ RETR. ____ CHK. ____

(SUBMITTED) [signature]
STATE ROAD & AIRPORT DESIGN ENGINEER
(APPROVED) [signature]
CHIEF ENGINEER

NUMBER 1120

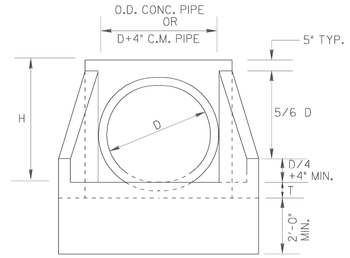
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	166	241

OUTLET HEADWALL

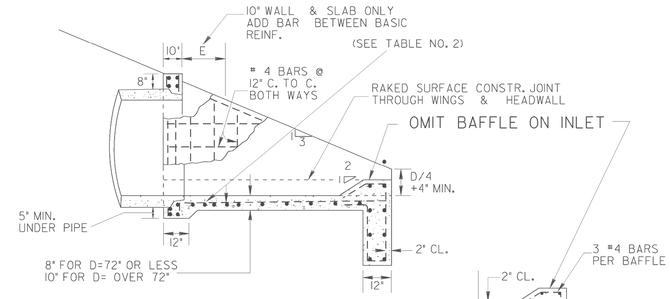


FRONT ELEVATION

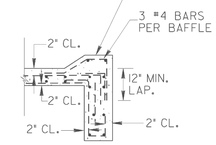
INLET HEADWALL



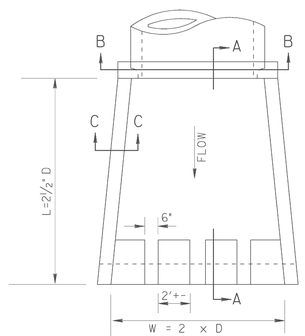
FRONT ELEVATION



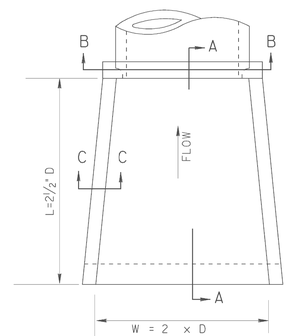
SECTION A-A



10" SLAB

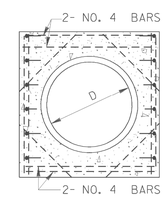


PLAN VIEW

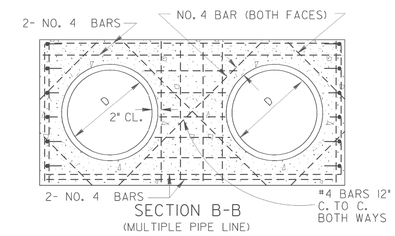


PLAN VIEW

D = INSIDE DIAMETER OF PIPE



SECTION B-B
(SINGLE PIPE LINE)



SECTION B-B
(MULTIPLE PIPE LINE)

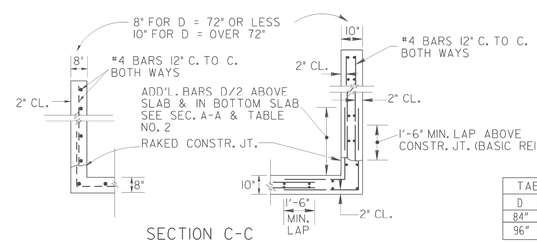
TABLE NO. 1 - QUANTITIES FOR HEADWALLS											
	CU. YDS. CONCRETE (PAY QUANTITIES) ✳						LBS. STEEL (GIVEN FOR INFORMATION ONLY)				
	FOR SINGLE LINE			ADD FOR ADD'L LINE			FOR SINGLE LINE			ADD FOR EACH ADD'L LINE	
D	INLET	OUTLET		INLET	OUTLET		INLET	OUTLET		INLET	OUTLET
15"	0.87	0.93		0.60	0.66		102	113		73	83
18"	1.10	1.16		0.85	0.93		106	117		93	104
24"	1.61	1.69		1.29	1.37		127	138		124	134
30"	2.21	2.32		1.83	1.96		170	180		154	164
36"	2.92	3.05		2.49	2.63		238	254		196	212
42"	3.73	3.87		3.00	3.17		290	306		231	247
48"	4.62	4.80		3.58	3.74		335	351		265	281
54"	5.63	5.83		4.17	4.38		407	428		319	340
60"	6.72	6.95		4.82	5.01		456	477		360	391
72"	9.22	9.48		6.24	6.46		623	649		475	494
84"	14.84	15.19		9.05	9.29		1517	1539		1017	1044
96"	18.88	19.27		11.13	11.41		2118	2150		1323	1350

✳NOTE:
QUANTITIES SHOWN WILL BE ACTUAL PAY QUANTITIES FOR CLASS "A" CONCRETE, INCLUDING REINFORCED STEEL. NO ADJUSTMENT WILL BE MADE FOR AS BUILT QUANTITIES.

D - INSIDE DIAMETER OF PIPE CULVERT

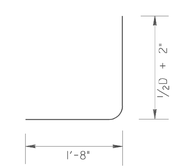
H = D + 10" MIN. FOR C.M. PIPE
H = D + PIPE WALL THICKNESS + 8" FOR CONC. PIPE
(13/12 D + 9" TYP.)

T = 8" FOR D = 72" OR LESS
T = 10" FOR D = OVER 72"



SECTION C-C

TABLE NO. 2		
D	ADD'L.BAR	E
84"	#4	5'
96"	#4	8'



ADDITIONAL BAR DETAIL

DATE	REVISION	BY

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
TAPERED
INLET HEADWALL - OUTLET HEADWALL
(BUILT-IN-PLACE)

NO SCALE — REV. & REDR. OCT., 1999

DES. ____ DRW. ____ TRA. ____ CHK. ____

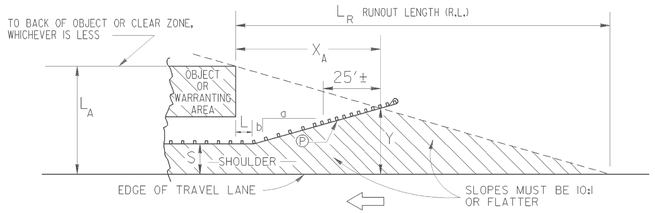
(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) CHIEF ENGINEER

NUMBER
1125

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	167	241

GUARDRAIL LENGTHS OF ADVANCEMENT AT FIXED OBJECTS OR AT WARRANTING FILL SLOPES TYPICAL

(FLARED)



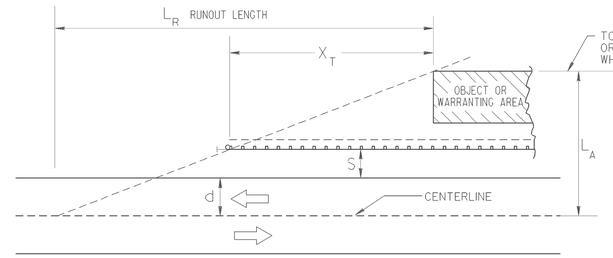
S = USUABLE SHOULDER WIDTH PLUS 2 FT. (TYP.)

$$X_A = \frac{L_A + (b/a)L - S}{b/a + (L_A/L_R)}$$

$$Y = L_A - \frac{L_A}{L_R}(X_A)$$

DESIGN SPEED (MPH)	FLARE RATE a:b
70	15:1
60	14:1
55	12:1
50	11:1
45	10:1
40	8:1
30	7:1

(STANDARD)

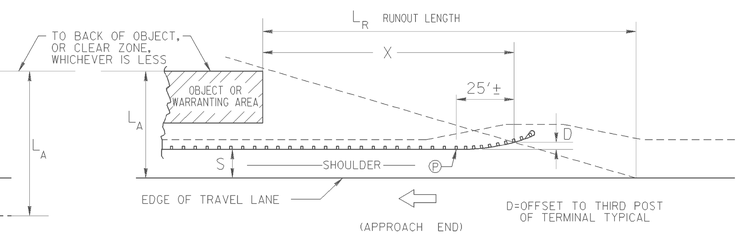


$$X_T = L_R \times \frac{L_A - (S+d)}{L_A}$$

(TRAILING END)

DESIGN SPEED (MPH)	L_R Runout Length in feet			
	OVER 6000 (A.D.T.)	2000-6000 (A.D.T.)	800-2000 (A.D.T.)	UNDER 800 (A.D.T.)
70	475	445	395	360
60	425	400	345	330
55	360	345	315	280
50	330	300	260	245
45	260	245	215	200
40	230	200	180	165
30	165	165	150	130

S = USUABLE SHOULDER WIDTH PLUS 2 FT. (TYP.)

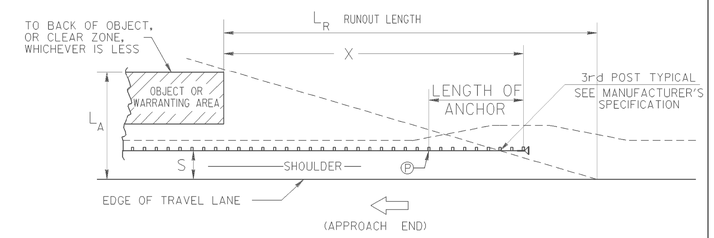


D=OFFSET TO THIRD POST OF TERMINAL TYPICAL

Ⓟ = POINT OF BEGINNING TERMINAL (TYP.)

$$X = L_R \times \frac{L_A - (S+D)}{L_A}$$

D=FLARE OF TERMINAL
D=0 FOR NON-FLARED TERMINALS



CLEAR ZONE DISTANCES

CLEAR ZONE DISTANCES (FT) CHART

DESIGN SPEED	DESIGN ADT	FORESLOPES			BACKSLOPES		
		IV:6H OR FLATTER	IV:5H TO IV:4H	IV:3H	IV:3H	IV:5H TO IV:4H	IV:6H OR FLATTER
40 M.P.H. OR LESS	UNDER 750	7-10	7-10	* *	7-10	7-10	7-10
	750-1500	10-12	12-14	* *	10-12	10-12	10-12
	1500-6000	12-14	14-16	* *	12-14	12-14	12-14
	OVER 6000	14-16	16-18	* *	14-16	14-16	14-16
45-50 M.P.H.	UNDER 750	10-12	12-14	* *	8-10	8-10	10-12
	750-1500	14-16	16-20	* *	10-12	12-14	14-16
	1500-6000	16-18	20-26	* *	12-14	14-16	16-18
	OVER 6000	20-22	24-28	* *	14-16	18-20	20-22
55 M.P.H.	UNDER 750	12-14	14-18	* *	8-10	10-12	10-12
	750-1500	16-18	20-24	* *	10-12	14-16	16-18
	1500-6000	20-22	24-30	* *	14-16	16-18	20-22
	OVER 6000	22-24	26-32*	* *	16-18	20-22	22-24
60 M.P.H.	UNDER 750	16-18	20-24	* *	10-12	12-14	14-16
	750-1500	20-24	26-32*	* *	12-14	16-18	20-22
	1500-6000	26-30	32-40*	* *	14-18	18-22	24-26
	OVER 6000	30-32*	36-44*	* *	20-22	24-26	26-28
65-70 M.P.H.	UNDER 750	18-20	20-26	* *	10-12	14-16	14-16
	750-1500	24-26	28-36*	* *	12-16	18-20	20-22
	1500-6000	28-32*	34-42*	* *	16-20	22-24	26-28
	OVER 6000	30-34*	38-46*	* *	22-24	26-30	28-30

* WHERE A SITE SPECIFIC INVESTIGATION INDICATES A HIGH PROBABILITY OF CONTINUING CRASHES, OR SUCH OCCURRENCES ARE INDICATED BY CRASH HISTORY, THE DESIGNER MAY PROVIDE CLEAR-ZONE DISTANCES GREATER THAN THE CLEAR-ZONE SHOWN ABOVE. CLEAR ZONES MAY BE LIMITED TO 30 FT. FOR PRACTICALITY AND TO PROVIDE A CONSISTENT ROADWAY TEMPLATE IF PREVIOUS EXPERIENCE WITH SIMILAR PROJECTS OR DESIGNS INDICATES SATISFACTORY PERFORMANCE.

* * SINCE RECOVERY IS LESS LIKELY ON THE UNSHIELDED, TRAVERSABLE IV:3H SLOPES, FIXED OBJECTS SHOULD NOT BE PRESENT IN THE VICINITY OF THE TOE OF THESE SLOPES. RECOVERY OF HIGH-SPEED VEHICLES THAT ENCROACH BEYOND THE EDGE OF THE SHOULDER MAY BE EXPECTED TO OCCUR BEYOND THE TOE OF SLOPE. DETERMINATION OF THE WIDTH OF RECOVERY AREA AT THE TOE OF SLOPE SHOULD TAKE INTO CONSIDERATION RIGHT-OF-WAY AVAILABILITY, ENVIRONMENTAL CONCERNS, ECONOMIC FACTORS, SAFETY NEEDS AND CRASH HISTORIES. ALSO, THE DISTANCE BETWEEN THE EDGE OF THE THROUGH TRAVELED LANE AND THE BEGINNING OF THE IV:3H SLOPE SHOULD INFLUENCE THE RECOVERY AREA PROVIDED AT THE TOE OF THE SLOPE.

HORIZONTAL CURVE ADJUSTMENTS

RADIUS (FEET)	K_{CZ} (CURVE CORRECTION FACTOR) DESIGN SPEED (MPH)						
	40	45	50	55	60	65	70
2860	1.1	1.1	1.1	1.2	1.2	1.2	1.3
2290	1.1	1.1	1.2	1.2	1.2	1.3	1.3
1910	1.1	1.2	1.2	1.2	1.3	1.3	1.4
1640	1.1	1.2	1.2	1.3	1.3	1.4	1.5
1430	1.2	1.2	1.3	1.3	1.4	1.4	
1270	1.2	1.2	1.3	1.3	1.4	1.5	
1150	1.2	1.2	1.3	1.4	1.5		
950	1.2	1.3	1.4	1.5	1.5		
820	1.3	1.3	1.4	1.5			
720	1.3	1.4	1.5				
640	1.3	1.4	1.5				
570	1.4	1.5					
380	1.5						

$CZ_C = (L_C)(K_{CZ})$

Where:

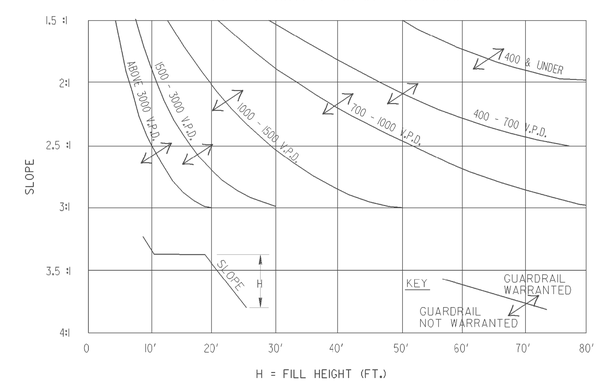
CZ_C = CLEAR ZONE ON OUTSIDE OF CURVATURE, FEET

L_C = CLEAR ZONES ON TANGENTS, FEET (SEE CHART AT LEFT)

K_{CZ} = CURVE CORRECTION FACTOR

NOTE:
THE CURVE CORRECTION FACTOR IS APPLIED TO THE OUTSIDE OF CURVES ONLY. CURVES FLATTER THAN 2860 FEET DO NOT REQUIRE AN ADJUSTED CLEAR ZONE.

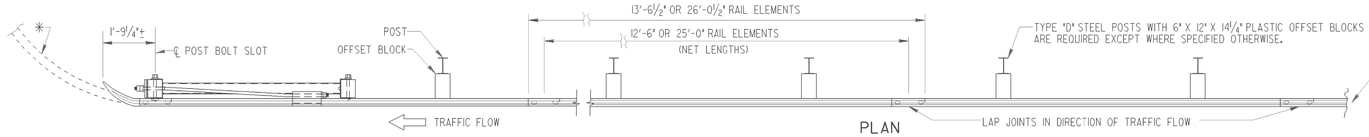
FILL HEIGHT / SLOPE WARRANTS



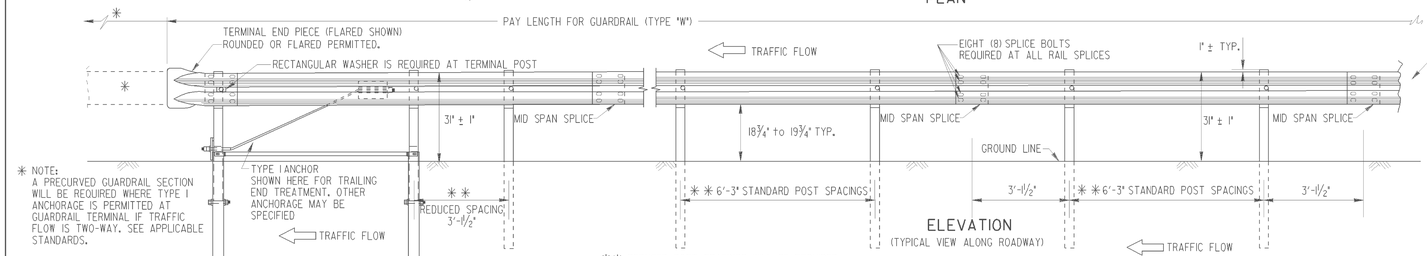
NOTE:
FILL HEIGHT/SLOPE EXTRAPOLATIONS WHICH FALL ABOVE AND TO THE RIGHT OF CURVE INDICATES GUARDRAIL IS WARRANTED FOR THE FILL EMBANKMENT.

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
REVISED GUARDRAIL AND CLEAR ZONE	9-1-07	REVISION	STANDARD GUARDRAIL WARRANT GUIDES LENGTHS OF ADVANCEMENT CLEAR ZONE DISTANCES FILL HEIGHT EMBANKMENTS
			NOT TO SCALE — DEC., 1999
G.L.O.	BY	DES. ____ DRW. ____ TRA. ____ CHK. ____	(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) CHIEF ENGINEER
			NUMBER 4000W

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	168	241



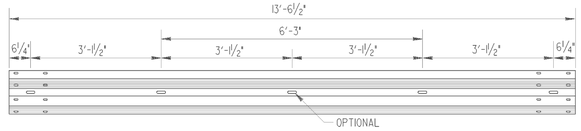
PLAN



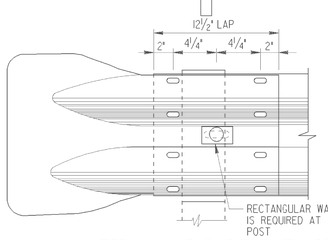
ELEVATION
(TYPICAL VIEW ALONG ROADWAY)

✱ NOTE:
A PRECURVED GUARDRAIL SECTION WILL BE REQUIRED WHERE TYPE I ANCHORAGE IS PERMITTED AT GUARDRAIL TERMINAL IF TRAFFIC FLOW IS TWO-WAY. SEE APPLICABLE STANDARDS.

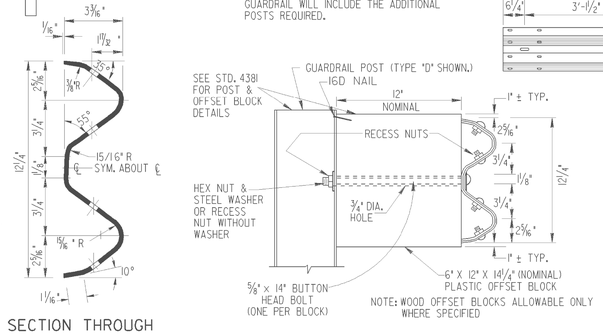
✱✱ REDUCED POST SPACINGS WILL BE REQUIRED AT TURNOUTS AROUND RADII, AT REDUCED OFFSETS TO FACE OF FIXED OBJECTS OR AT OTHER SPECIFIED LOCATIONS. SEE PLAN DETAILS OR APPLICABLE STANDARDS. PAYMENT FOR GUARDRAIL WILL INCLUDE THE ADDITIONAL POSTS REQUIRED.



12'-6" W-BEAM SECTION



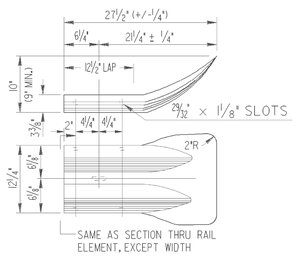
TERMINAL END PIECE (FLARED)



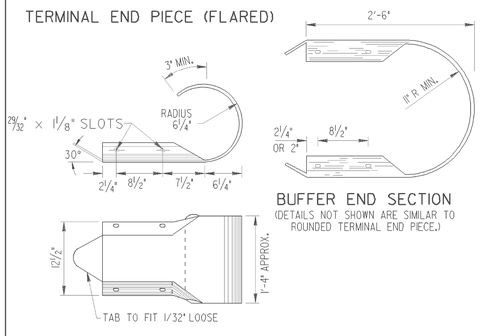
"W" BEAM OFFSET BLOCK DETAIL
NOTE: OFFSET BLOCKS FOR "W" BEAM GUARDRAIL WILL BE PLASTIC EXCEPT WHERE SPECIFIED OTHERWISE.

"W" BEAM SPLICE MID SPAN
NOTE:
EIGHT (8) SPLICE BOLTS REQUIRED AT ALL RAIL SPLICES

SECTION THROUGH RAIL ELEMENT

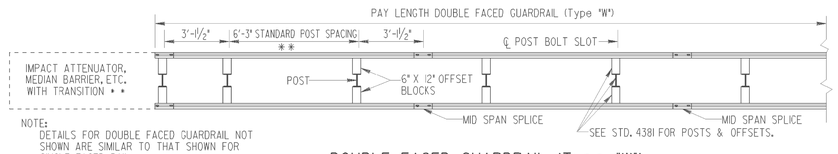


TERMINAL END PIECE (FLARED)



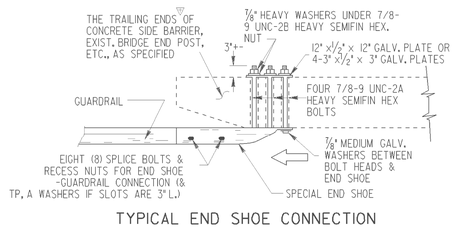
BUFFER END SECTION
(DETAILS NOT SHOWN ARE SIMILAR TO ROUNDED TERMINAL END PIECE.)

TERMINAL END PIECE (ROUNDED)



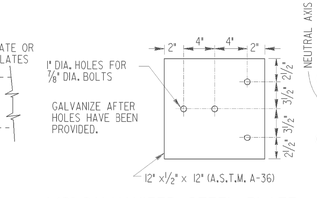
NOTE:
DETAILS FOR DOUBLE FACED GUARDRAIL NOT SHOWN ARE SIMILAR TO THAT SHOWN FOR SINGLE FACED RAIL.

DOUBLE FACED GUARDRAIL (Type "W")

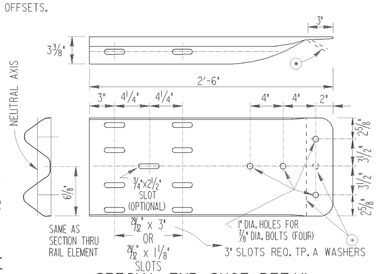


TYPICAL END SHOE CONNECTION
NOTE: THE "W" BEAM RAIL ELEMENT/END SHOE SPLICE SHALL BE LAPPED IN THE DIRECTION OF THE NEAREST TRAFFIC.

▽ "W" BEAM END CONNECTIONS ARE NOT PERMITTED AT APPROACHES TO CONCRETE STRUCTURES. SEE SEPARATE STANDARDS FOR REQUIRED "T" BEAM CONNECTIONS.



1/2" GALVANIZED STEEL PLATE
(TO BE USED WITH SPECIAL END SHOE CONNECTION UNDER NUTS & WASHERS ON BACK OF BRIDGE END POST OR BACK OF CONCRETE SIDE BARRIER) (FOUR 3" x ½" x 3" GALV. PLATES WITH 1" DIA. HOLE CENTERED, MAY BE USED AS AN ALTERNATE)



SPECIAL END SHOE DETAIL
(FOR USE IN CONNECTING GUARDRAIL TO BRIDGE END POST, CONCRETE BARRIERS, ETC.)
SPECIAL END SHOE WILL BE 10 GAUGE STEEL GALVANIZED ACCORDING TO A.A.S.H.T.O. M-111

⊙ APPLIES ONLY TO END SHOE WITH BUFFERED END ASSEMBLY OF ANCHORAGE.

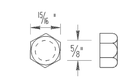
NOTE:
UNLESS SPECIFIED OTHERWISE, ALL REFERENCES TO GUARDRAIL ON STANDARDS AND/OR CONSTRUCTION DETAILS WILL MEAN "W" BEAM GUARDRAIL AS SHOWN ON THIS STANDARD.

TYPE A WASHER (GALV.)
IF SLOTS IN SPECIAL END SHOE ARE 3" LONG TP. A WASHERS ARE REQ'D UNDER SPLICE BOLT HEADS & UNDER NUTS WITH 2" LONG SPLICE BOLTS. IF END SHOE SLOTS ARE 1⅛" LONG, USE NORMAL SPLICE CONNECTIONS

STEEL WASHER (GALV.)
(REQ'D. UNDER ⅝" HEX NUTS AND AS SPECIFIED)

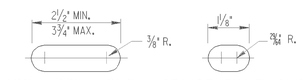
SPECIAL NOTE:
ALL GUARDRAIL SPLICES WILL BE PROPERLY SECURED WITH EIGHT SPLICE BOLT CONNECTIONS. ALL NUTS WILL BE TIGHTENED. LOOSE NUTS, OMITTED BOLTS, OR OMITTED NUTS WILL BE CAUSE FOR REJECTION.

GUARDRAIL NOT ERECTED AT A 31" TOP OF RAIL HEIGHT MAY BE CAUSE FOR REJECTION.

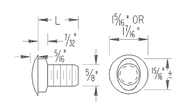


⅝" DIA. HEX NUT

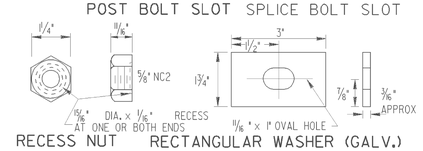
L	THREAD LENGTH
1¼"	FULL LENGTH
2"	1½" MIN.
9½"	1¾" MIN.
14"	2" MIN.



POST BOLT SLOT SPLICE BOLT SLOT



BUTTON HEAD (OR SPLICE) BOLT
(8 REQ'D PER SPLICE)



RECESS NUT RECTANGULAR WASHER (GALV.)
(FOR USE AT TERMINAL POST OR WHERE SPECIFIED)

GENERAL NOTES:

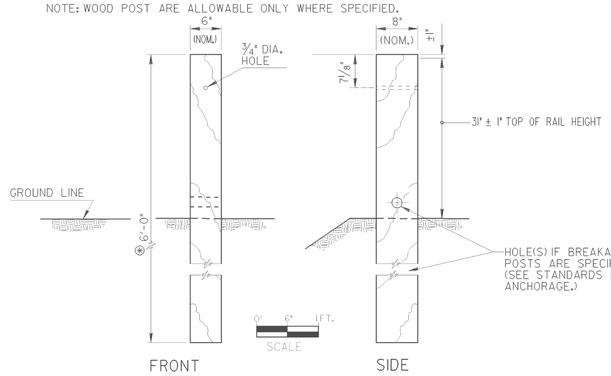
1. SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. NUTS, BOLTS, WASHERS, RAIL, TERMINAL SECTIONS, END SHOES, BACK-UP PLATES, END SECTIONS AND OTHER GUARDRAIL HARDWARE ARE IN ACCORDANCE WITH THE CURRENT ARTBA TECHNICAL BULLETIN NO. 268 -- UNLESS SPECIFIED OTHERWISE. DIMENSIONS FOR POSTS AND OFFSET BLOCKS WILL BE ACCORDING TO GA. STANDARD 4381.
3. FOR DETAILS OF GUARDRAIL ANCHORAGES, SEE APPLICABLE STANDARDS AND/OR CONSTRUCTION DETAILS.
4. FOR LOCATION OF GUARDRAIL SEE APPLICABLE LOCATION STANDARDS.
5. ALL STEEL HARDWARE COMPONENTS WILL BE GALVANIZED AFTER FABRICATION. GALVANIZING REPAIR COMPOUND (SEC. 645) WILL BE FIELD APPLIED TO ANY COATINGS DAMAGED.
6. WHEN GUARDRAIL IS REQUIRED ON CURVES WITH RADII LESS THAN 150', PRECURVED RAIL WILL BE REQUIRED.
7. PAYMENT FOR GUARDRAIL (Type "W") TO INCLUDE OFFSET BLOCKS, POST, BACK-UP PLATES WHERE REQUIRED, BOLTS, NUTS, WASHERS, TERMINAL SECTIONS, ADDITIONAL POST WHERE REQUIRED, & REMOVAL AND REPLACEMENT OF PORTIONS OF MEDIAN PAVING, SPILLWAYS, OR CATCH BASINS WHERE NECESSARY.
8. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
9. STANDARD NET LENGTH OF RAIL ELEMENTS MAY BE EITHER 12'-6" OR 25'-0". THESE LENGTHS SHALL BE ARRANGED TO PROVIDE AS NEARLY AS POSSIBLE THE REQUIRED LENGTH FOR EACH INSTALLATION.
10. WHEN REPLACING EXISTING 27" HEIGHT RUNS OF GUARDRAIL WITH 31" HEIGHT RAIL THE EXISTING OFFSET DISTANCE FROM THE GUARDRAIL POST TO THE EDGE OF PAVEMENT MAY REMAIN THE SAME.

REVISION	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
		STANDARD "W" BEAM GUARDRAIL 31 INCH GUARDRAIL HEIGHT
		NO SCALE — AUGUST 2011
BY	DES. G.L.O. (SUBMITTED) STATE DESIGN POLICY ENGINEER DRW. G.L.O. CHK. B.R.E. (APPROVED) CHIEF ENGINEER REVIEW B.A.S.	NUMBER 4380

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	169	241

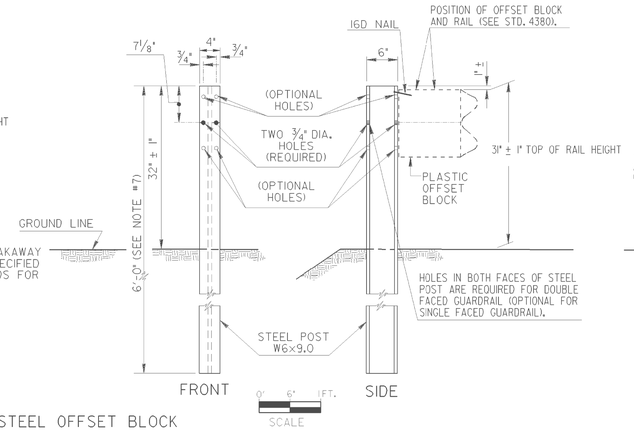
TYPE A WOOD POST (FOR "W" BEAM GUARDRAIL)

NOTE: WOOD POST ARE ALLOWABLE ONLY WHERE SPECIFIED.

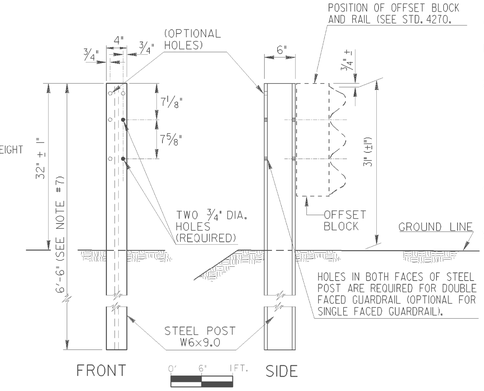


SEE SEPARATE STANDARD OR DETAIL FOR POSTS IN TUBE SLEEVE.

TYPE D STEEL POST (FOR "W" BEAM GUARDRAIL)



TYPE D-T STEEL POST (FOR "T" BEAM GUARDRAIL)



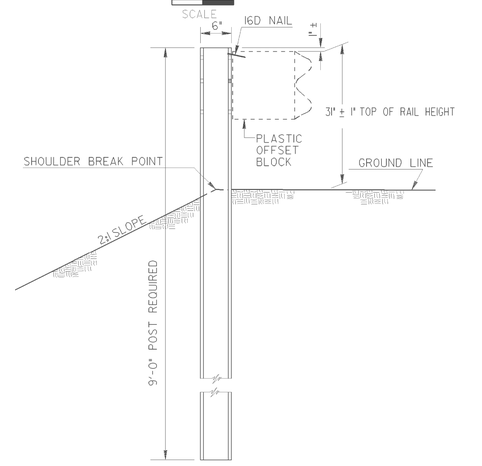
GENERAL NOTES:

1. SPECIFICATIONS GEORGIA STANDARD, CURRENT EDITION AND SUPPLEMENTS THERETO.
2. STEEL POSTS MAY BE EITHER ROLLED OR WELDED STRUCTURAL SHAPES. STEEL OFFSET BLOCKS SHALL BE ROLLED. WELDED POSTS SHALL BE SEAL WELDED BETWEEN WEB AND FLANGE BEFORE GALVANIZING.
3. WHERE WOOD POST OR WOOD OFFSET BLOCKS ARE PERMITTED, THE WOOD SHALL BE TREATED IN ACCORDANCE WITH GEORGIA STANDARD SPECIFICATIONS.
4. ALL BOLTS USED FOR FASTENING THE RAIL AND OFFSET BLOCKS TO WOOD POSTS SHALL HAVE SUFFICIENT LENGTH TO EXTEND AT LEAST 1/4" BEYOND THE FULL NUT, UP TO 3" BEYOND.
5. (a) "W" BEAM GUARDRAIL: ALL OFFSET BLOCKS SHALL BE 12" DEPTH PLASTIC BLOCKS EXCEPT FOR (d) BELOW.

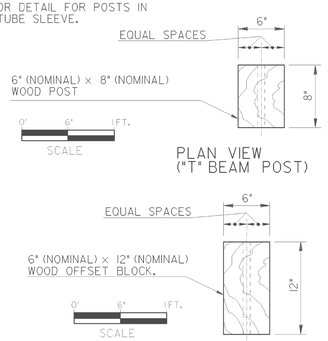
   (b) "T" BEAM GUARDRAIL: STANDARD INSTALLATION WILL USE 8" DEPTH PLASTIC BLOCKS UNLESS OTHERWISE APPROVED.

   (c) 13 3/4" DEPTH MODIFIED STEEL OFFSETS MAY BE SPECIFIED WHERE JUSTIFIED FOR MORE SEVERE CONDITIONS. PAY ITEM IS --GUARDRAIL, TP T, MODIFIED OFFSET BLOCK---PER LIN. FT.

   (d) WOOD OFFSET BLOCKS MAY BE USED ONLY AT AN ISOLATED LOCATION WITHIN A RUN OF GUARDRAIL, WHERE OTHER BLOCK TYPES WOULD NOT PROVIDE PROPER FIT, AS DETERMINED BY THE ENGINEER OR SHOWN IN THE PLANS.
6. POSTS WILL BE SPACED AT 6'-3" C. TO C., UNLESS OTHERWISE NOTED.
7. ADDITIONAL LENGTH POSTS, WHERE SPECIFIED, SHALL BE 7'-0" AND 7'-6" LONG FOR "W" BEAM AND "T" BEAM GUARDRAILS RESPECTIVELY, WITH HOLES DIMENSIONED FROM THE POST-TOP THE SAME AS SHOWN.
8. 9'-0" POST REQUIRED IF GUARDRAIL INSTALLED ON A 2:1 SLOPE.



2:1 SLOPE DETAIL



PLAN VIEW ("T" BEAM POST)

PLAN VIEW (FOR "W" BEAM OFFSET BLOCK)

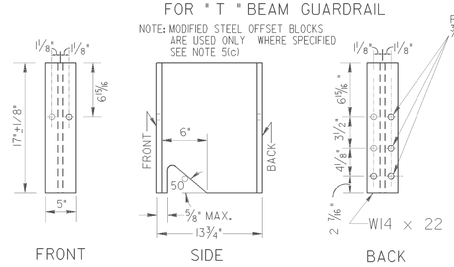
WOOD POSTS AND WOOD OFFSET BLOCKS MAY BE ROUGH OR SURFACED.

DIMENSIONS FOR WOOD POSTS AND WOOD OFFSET BLOCKS ARE NOMINAL IN ACCORDANCE WITH ACCEPTED LUMBER INDUSTRY STANDARDS.

NOTE:
WHERE WOOD OFFSET BLOCK ON STEEL POST IS PERMITTED IN "W" BEAM INSTALLATION, A NAIL OR SCREW FROM POST TO WOOD IS REQUIRED TO PREVENT ROTATION OF THE BLOCK.

MODIFIED STEEL OFFSET BLOCK FOR " T " BEAM GUARDRAIL

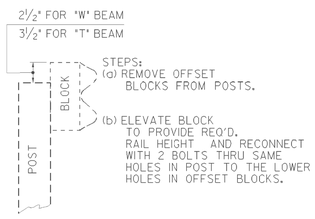
NOTE: MODIFIED STEEL OFFSET BLOCKS ARE USED ONLY WHERE SPECIFIED SEE NOTE 5(c)



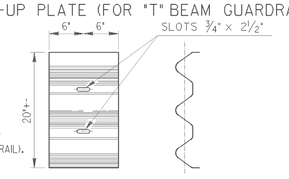
FRONT SIDE BACK

NO SCALE

HEIGHT CORRECTION IF NEEDED FOR RESURFACED PROJECTS



BACK-UP PLATE (FOR "T" BEAM GUARDRAIL)



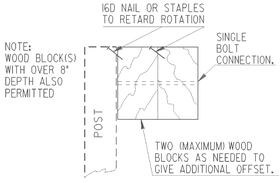
FRONT

SAME AS SECTION THROUGH RAIL (STANDARD 4270)

NOTE:
BACK-UP PLATES ARE REQUIRED WITH ALL STEEL OFFSET BLOCKS EXCEPT AT RAIL SPLICES OR WHERE ONE RAIL SECTION IS NESTED INSIDE ANOTHER RAIL SECTION. BACK-UP PLATE WILL BE LOCATED BACK OF RAIL ADJACENT TO OFFSET BLOCKS (INSIDE MAIN RAIL).

ADDITIONAL DEPTH OFFSET BLOCKOUTS

(FOR USE WHERE GREATER THAN STANDARD OFFSET IS SPECIFIED)



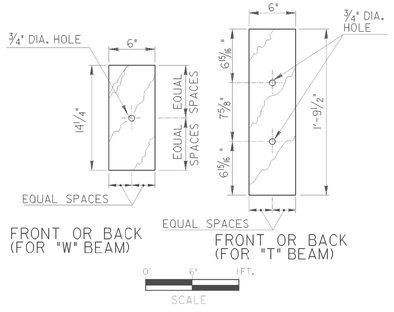
NOTE: ADDITIONAL DEPTH OFFSETS BELOW ARE SHOWN FOR "W" BEAM. SIMILAR OFFSETS MAY BE APPLIED FOR "T" BEAM GUARDRAIL.

NOTE: ADDITIONAL DEPTH OFFSETS ARE PERMITTED ONLY WHERE AN ISOLATED POST MUST BE PLACED AT A GREATER THAN NORMAL OFFSET.

NOTE: FOR BLOCK CONNECTION TO POST AND TO RAIL SEE STD. 4380 OR 4385.

WOOD OFFSET BLOCKS

(WHERE PERMITTED, SEE NOTE 5(d))



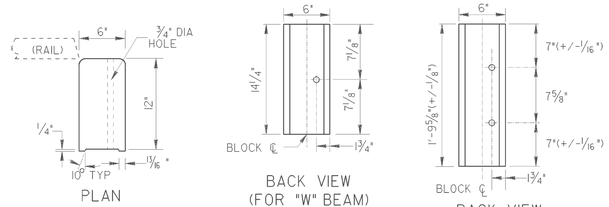
FRONT OR BACK (FOR "W" BEAM)

FRONT OR BACK (FOR "T" BEAM)

(PLAN VIEW IS SAME AS SHOWN FOR WOOD POST ABOVE)

STANDARD PLASTIC OFFSET BLOCKS

NOTE: PLASTIC OFFSET BLOCKS SHALL BE OF TYPE LISTED IN GA. DOT OPL OF APPROVED PRODUCTS OR PER STANDARD SPECIFICATIONS.



PLAN

NOTE:
DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES.

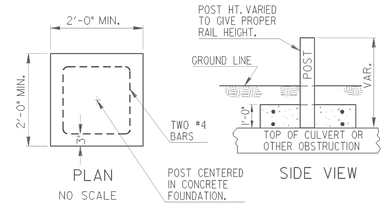
BACK VIEW (FOR "W" BEAM)

NO SCALE

BACK VIEW (FOR "T" BEAM)

CONCRETE FOUNDATION FOR POST IN SHALLOW FILLS OVER CULVERTS OR OTHER OBSTRUCTIONS

(NOTE: PLATE MOUNTED POST MAY BE USED AS AN ALTERNATE. SEE SEPARATE SHEET).



PLAN

NO SCALE

SIDE VIEW

STEEL POST TO BE PLUMBED AND FOUNDATION CONCRETE POURED AROUND POST TO FINISHED ELEVATION.

PAYMENT FOR GUARDRAIL TO INCLUDE ALL EXTRA WORK AND MATERIALS INCLUDING CONCRETE (CL. A OR CL. B) AND NO. 4 BARS.

IF OFFSET FROM RAIL FACE TO HEADWALL IS LESS THAN 4'-3", POST SPACINGS ARE REDUCED TO 3'-1/2" C.C. ACROSS THE CULVERT WITH 7 SUCH SPACINGS IN ADVANCE AT NO ADDITIONAL PAYMENT.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
POSTS AND OFFSET BLOCKS FOR "W" & "T" BEAM GUARDRAIL 31 INCH GUARDRAIL HEIGHT

SCALE: AS SHOWN — AUGUST 2011

BY		DATE
DES.	G.L.O.	(SUBMITTED) STATE DESIGN POLICY ENGINEER
DRW.	G.L.O.	
CHK.	B.R.E.	(APPROVED) CHIEF ENGINEER
REVIEW	B.A.S.	

REVISION

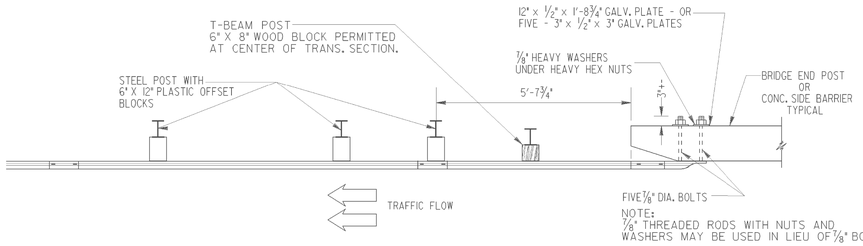
NUMBER 4381

12/7/2011 8:05:16 AM \\GDOT-DSN1\GDPLOT\QCF\GO_Kip8000.qcf tcox C:\tpc\31inch guardrail\new 31 inch guardrail files\4382.pdf GO-RD6
9/21/2011 8:13:53 AM \\GDOT-DSN1\GDPLOT\QCF\GO_Kip8000.qcf gowens V:\GARY\31 inch guardrail standards\4012C rev 4382.prf

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	170	241

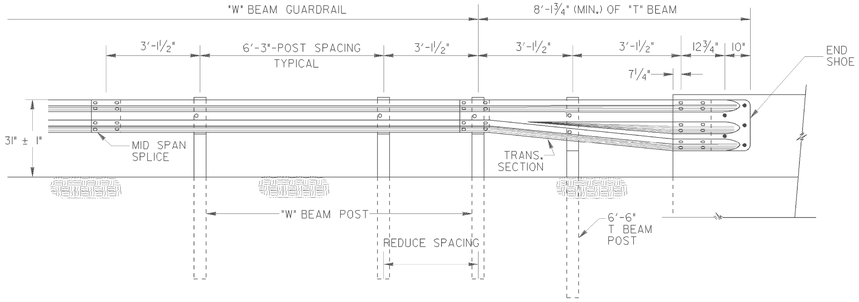
31 INCH HEIGH GUARDRAIL CONNECTION AT TRAILING ENDS

(SEE NOTE AT BOTTOM LEFT)



NOTE:
7/8" THREADED RODS WITH NUTS AND WASHERS MAY BE USED IN LIEU OF 7/8" BOLTS.

PLAN



ELEVATION

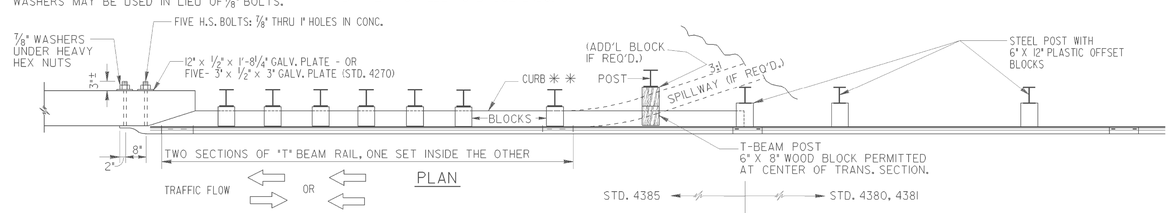
NOTE:
DETAILS AT TOP LEFT ARE APPLICABLE FOR CONNECTIONS AT THE TRAILING ENDS OF ONE-WAY TRAFFIC OR AT THE TRAILING END OF MULTI-LANE (4 OR MORE) FACILITIES.

NOTE:
DETAILS AT TOP RIGHT ARE APPLICABLE FOR CONNECTIONS AT THE APPROACH ENDS OF BRIDGES OR CONCRETE SIDE BARRIERS OR AT ALL FOUR ENDS FOR TWO-LANE, TWO WAY TRAFFIC.

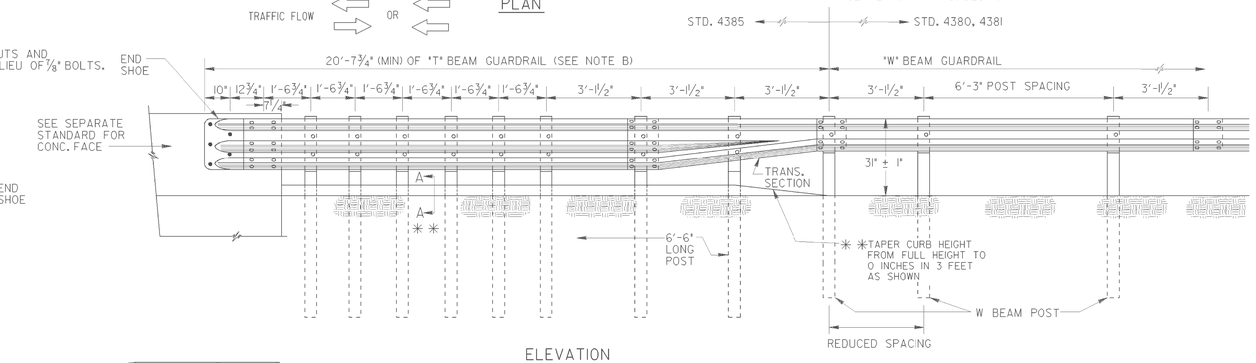
GUARDRAIL CONNECTION AT BRIDGE END (OR CONCRETE BARRIER)

(DETAILS ARE ILLUSTRATED WITH APPROACH SLAB, SPILLWAY, ETC. FOR TYPICAL BRIDGE END, POST SPACINGS AND END SHOE CONNECTION APPLIES TO ROADWAY CONCRETE BARRIER AS WELL AS BRIDGE ENDS.)

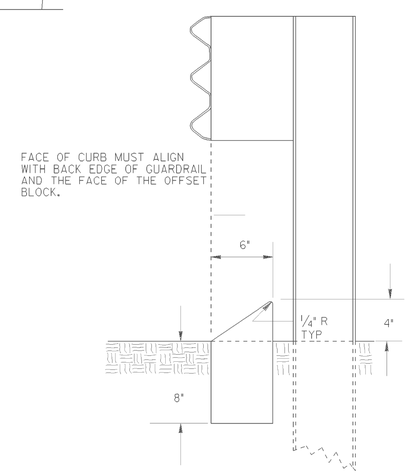
NOTE:
7/8" THREADED RODS WITH NUTS AND WASHERS MAY BE USED IN LIEU OF 7/8" BOLTS.



PLAN



ELEVATION



SECTION A-A * *

NOTES FOR GUARDRAIL CONNECTION:

A. WHERE GREATER THAN THE MINIMUM LENGTH OF T-BEAM GUARDRAIL IS REQUIRED ADDITIONAL POST REMAIN AS SHOWN WITHIN THE FIRST 20'-7 3/4" LENGTH, WITH NORMAL (6'-3" C. TO C.) SPACINGS FOR THE REMAINDER OF THE INSTALLATION (STD. 4385) UNLESS SPECIFIED OTHERWISE.

B. PAYMENT FOR GUARDRAIL TYPE T INCLUDES ALL ADDITIONAL POST, ALL ADDITIONAL OFFSET BLOCKS, THE SPECIAL END SHOE CONNECTION WITH ACCOMPANY HARDWARE, THE EXTRA SECTION OF "T" BEAM RAIL NESTED INSIDE THE OTHER, AND THE "T" BEAM TO "W" BEAM TRANSITION SECTION.

C. WHERE GUARDRAIL POST ARE ERECTED THRU SPILLWAY, CONCRETE CAP OR PAVING UNDER GUARDRAIL, PAYMENT FOR GUARDRAIL, OF ANY TYPE SHALL INCLUDE REPLACING THE BLOCKED OUT CONCRETE AND/OR REMOVING AND REPLACING PORTIONS OF SPILLWAY, CONCRETE, OR GROUT AS NECESSARY FOR POST INSTALLATIONS.

* * FOR CURB DETAILS ASSOCIATED WITH APPROACH SLAB, SEE APPROACH SLAB STANDARD. FOR GUARDRAIL INSTALLATION LOCATIONS WHERE AN APPROACH SLAB IS NOT USED, PROVIDE A CONCRETE CURB IN ACCORDANCE WITH SECTION 'A-A'. CONCRETE CURB SHALL BE PAID FOR PER LINEAR FOOT.

NOTE: POST SPACINGS SHOWN ARE TYPICAL AVERAGE WITH NORMAL CONSTRUCTION TOLERANCES ALLOWED.

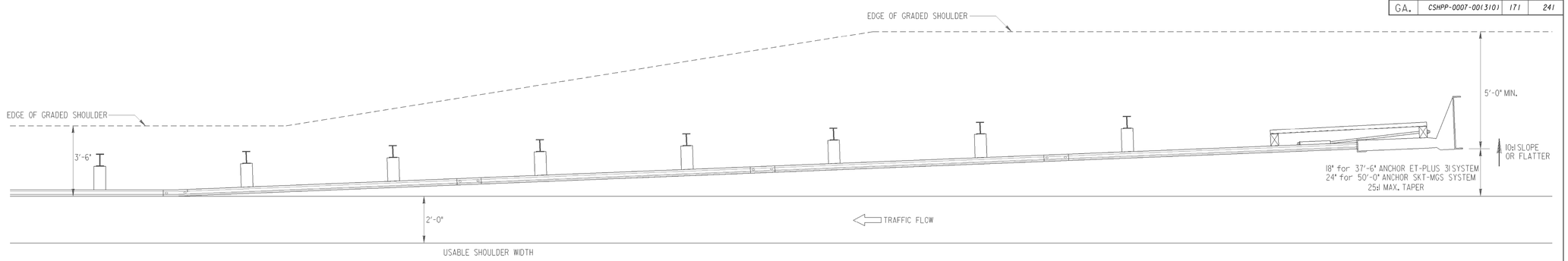
GENERAL NOTES:

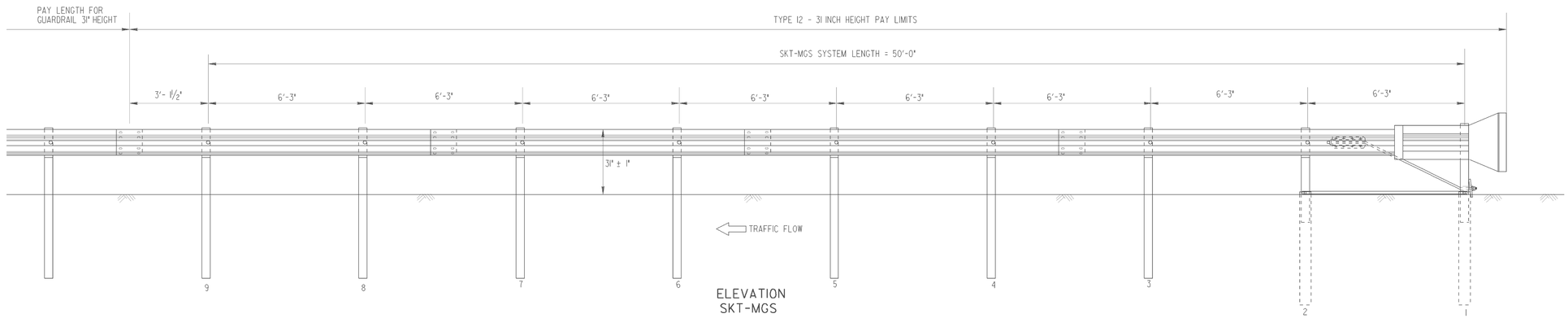
1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
2. FOR DETAILS OF GUARDRAIL HARDWARE, POST, OFFSET BLOCKS, END SHOE, TRANSITION SECTION, ETC., SEE SEPARATE STANDARDS AS APPLICABLE.
3. GUARDRAIL INSTALLATIONS, INCLUDING ANCHORAGES AND CONNECTIONS, ARE TO BE COMPLETED BEFORE BEING SUBJECT TO TRAFFIC UNLESS OTHERWISE APPROVED.
4. OFFSET BLOCKS SHALL BE PLASTIC UNLESS SPECIFIED OTHERWISE. OFFSET BLOCKS ARE REQUIRED AT ALL POSTS.
5. THE COST FOR DRILLING HOLES FOR THE END SHOE CONNECTION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE GUARDRAIL.

DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA		
REVISION	STANDARD GUARDRAIL CONNECTION AT BRIDGE END OR AT CONCRETE BARRIER END FOR 31 INCH HIGH GUARDRAIL		
	NO SCALE		AUGUST 2011
BY	DES. G.L.O. (SUBMITTED) STATE DESIGN POLICY ENGINEER DRW. G.L.O. CHK. B.R.E. (APPROVED) CHIEF ENGINEER REVIEW B.A.S.		NUMBER 4382

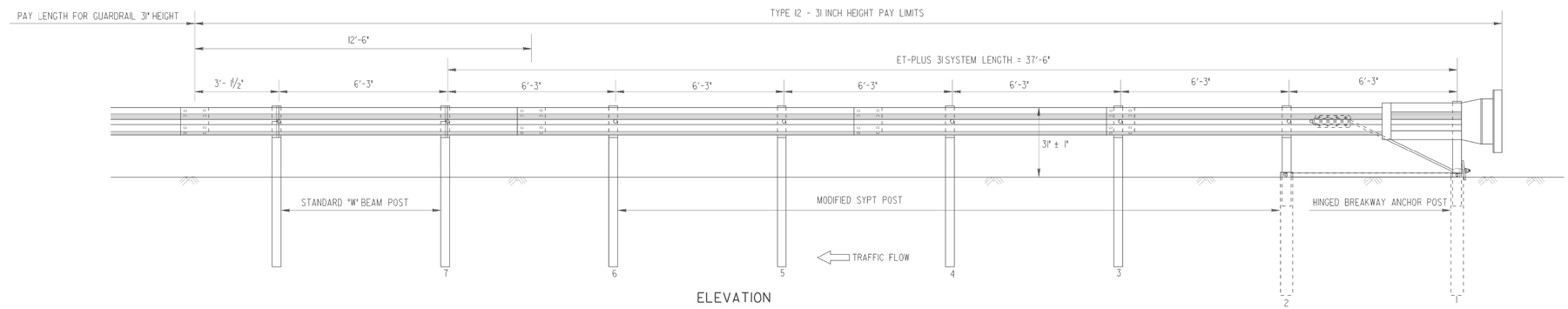
12/7/2011 8:05:16 AM \\GDOT-DSN1\GDPLOT\QCF\GO_Kip8000.qcf tcox C:\tpc\31inch guardrail\new 31 inch guardrail files\4382.pdf

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	171	241





ELEVATION
SKT-MGS



ELEVATION
ET-PLUS 31

GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. GUARDRAIL ANCHORAGE TYPE 12, 31 INCH HEIGHT SHALL BE AN ET-PLUS 31 AS MANUFACTURED BY TRINITY INDUSTRIES, INC. OR AN SKT-MGS AS MANUFACTURED BY ROAD SYSTEMS, INC. AND SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
3. A MAXIMUM FLARE OF 25:1 OVER THE SYSTEM LENGTH OF THE TERMINAL IS REQUIRED FOR EITHER THE ET-PLUS 31 OR THE SKT-MGS.

DATE | REVISION

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD

TYPE 12
31 INCH GUARDRAIL HEIGHT

NO SCALE — AUGUST 2011

BY: DES. G.L.O. (SUBMITTED) — STATE DESIGN POLICY ENGINEER
DRW. G.L.O.
CHK. B.R.E. (APPROVED) — CHIEF ENGINEER
REVIEW B.A.S.

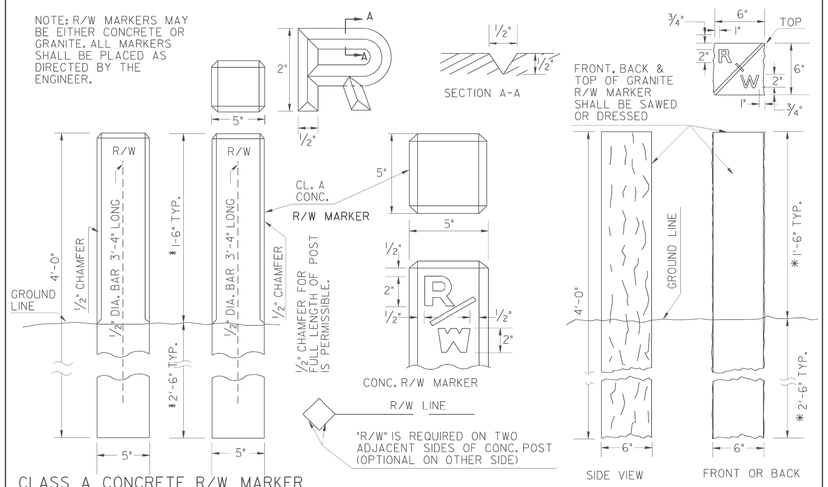
NUMBER 4384

10/3/2006 10:40:43 AM \\GDOT-DSN1\GOPLOT\OCF\go_tiff_output.gcf gowens W:\GARY\Revised 9003\9003.prf GO-RD6

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	172	241

DETAILS OF RIGHT OF WAY MARKERS

NOTE: R/W MARKERS MAY BE EITHER CONCRETE OR GRANITE. ALL MARKERS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.



CLASS A CONCRETE R/W MARKER

(ALTERNATE) GRANITE R/W MARKER

* NOTE: WHERE DIRECTED BY THE ENGINEER, THE ABOVE GROUND HEIGHT OF ANY R/W MARKER SHALL BE REDUCED BY INCREASING THE DEPTH AS NEEDED WITH NO ADDITIONAL PAYMENT.

BY	REVISION	DATE
G.L.O.	REDRAWN TO MATCH METRIC Ga. STD. 9003	4-10-06
G.J.P.	REDRAWN	6-30-98
R.M.U.	REV. F.A.P. - SP. POST ALT.	9-28-90
R.M.U.	VAR. HT. R/W MARKER	10-11-88
R.M.U.	ADD GRANITE R/W M.	5-24-85

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
DETAILS OF MARKERS
FEDERAL AID AND STATE
RIGHT OF WAY MARKERS

NO SCALE — REV. & REDR. DEC., 1981

DES. ____
DRW. R.M.U.
TRA. G.M.E.
CHK. R.K.C.

(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGINEER
(APPROVED) CHIEF ENGINEER

NUMBER 9003

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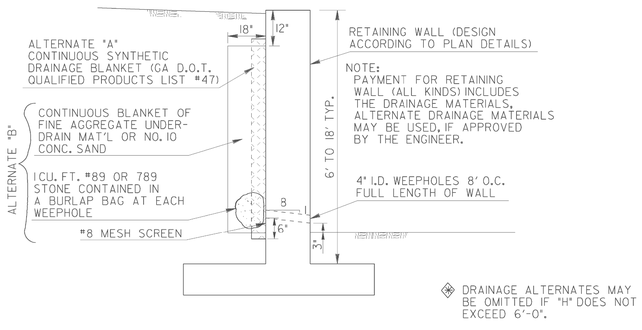
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	173	241

DETAILS OF RETAINING WALL TYPICAL SECTIONS



◈ DRAINAGE ALTERNATES MAY BE OMITTED IF "H" DOES NOT EXCEED 6'-0".

STANDARD DRAINAGE FOR RETAINING WALLS

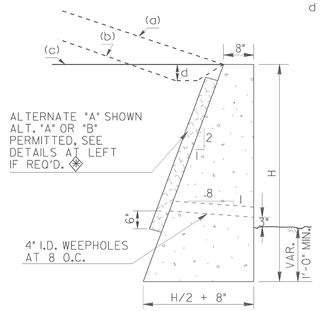
(FOR HEIGHTS FROM 6 FT. TO 18 FT.- SPECIAL DESIGN DRAINAGE REQUIRED FOR RETAINING WALLS OVER 18 FT. IN HEIGHT.)

(a) - SLOPED BACKFILL, NO DITCH

(b) - SLOPED BACKFILL WITH DITCH

(c) - FLAT BACKFILL

d = DITCH DEPTH, 6'-12" TYPICAL SEE PLANS FOR DESIGN



MAXIMUM "H" *		
BACKFILL	PLAIN WALL	W.BARRIER FACE
FLAT	10'-0" **	10'-0"
SLOPE TO 4:1	6'-3"	7'-0"
SLOPE TO 2:1	4'-6"	4'-9"

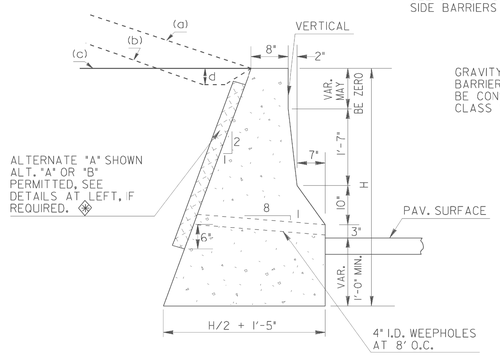
*GREATER "H" PERMITTED IF APPROVED BY BRIDGE DESIGN.

**MAXIMUM "H" OF 7'-3" HERE IF TRAFFIC IS ON BACKFILL.

TYPICAL SECTION FOR GRAVITY TYPE WALL

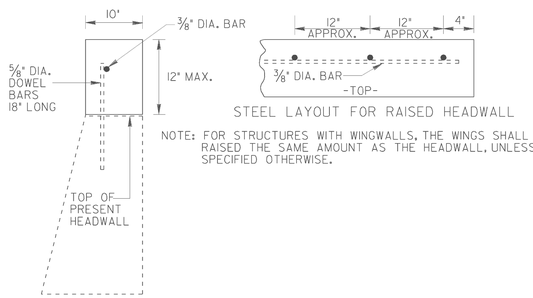
MATERIALS: CLASS "B" CONC. OR MORTAR RUBBLE MASONARY.

NOTE: SEE STANDARD 4948 WHERE CONCRETE SIDE BARRIERS ARE DESIRED.



TYPICAL SECTION FOR GRAVITY WALL WITH BARRIER FACE

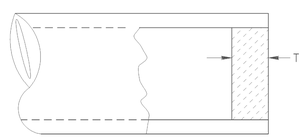
DETAIL FOR RAISING HEADWALL



STEEL LAYOUT FOR RAISED HEADWALL

NOTE: FOR STRUCTURES WITH WINGWALLS, THE WINGS SHALL BE RAISED THE SAME AMOUNT AS THE HEADWALL, UNLESS SPECIFIED OTHERWISE.

TYPICAL PIPE PLUG



SECTION

NOTE: PLAN PAY QUANTITIES ARE TO REFLECT PIPE PLUGS AS CU. YDS. OF CL. A OR CL. B CONCRETE. ON CONSTRUCTION PLUGS MAY BE BUILT WITH BRICK MASONRY, MORTAR RUBBLE MASONRY, CL. A CONC., OR CL. B CONC. WITH NO ADJUSTMENT IN PAYMENT MADE FOR ALTERNATES.

D	T (MIN)	PIPE PLUG (CU. YDS.)
12"	8"	0.0194
15"	8"	0.0303
18"	8"	0.0436
24"	8"	0.0776
30"	8"	0.1212
36"	8"	0.1745
42"	8"	0.2376
48"	8"	0.3103
54"	12"	0.5890
60"	12"	0.7272
66"	12"	0.8799
72"	12"	1.0472

REVISION	DATE
REDRAWN	6-30-98
ADD PIPE PLUG DETAILS	4-30-84
RET. WALL "H" TABLE ADDED	2-15-83

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
RETAINING WALL TYPICAL SECTIONS, RAISING HEADWALL, AND TYPICAL PIPE PLUG.

NO SCALE: REV. & REDR. DECEMBER, 1982

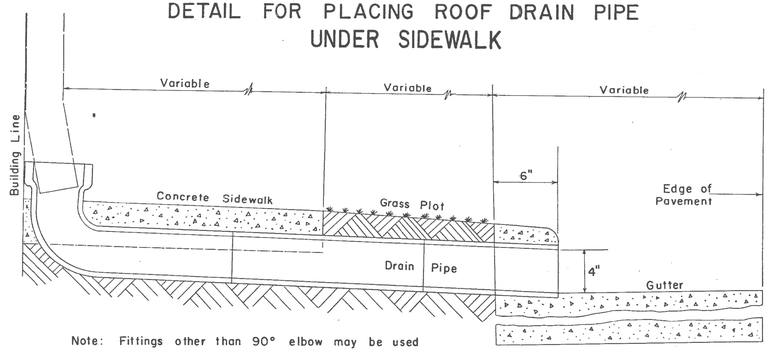
BY: G.J.P. R.M.U. R.M.U.

REV. & REDR. R.M.U. (SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR.
TRA. G.M.E. (APPROVED) STATE HIGHWAY ENGINEER
CHK. R.K.C.

NUMBER 9031L
SHEET 1 OF 2

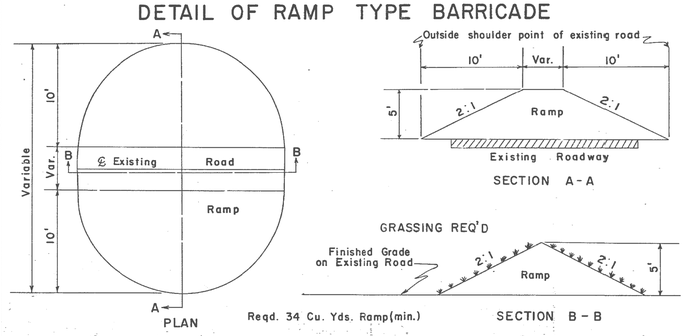
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	174	241

DETAIL FOR PLACING ROOF DRAIN PIPE UNDER SIDEWALK



Note: Fittings other than 90° elbow may be used to satisfy other conditions.

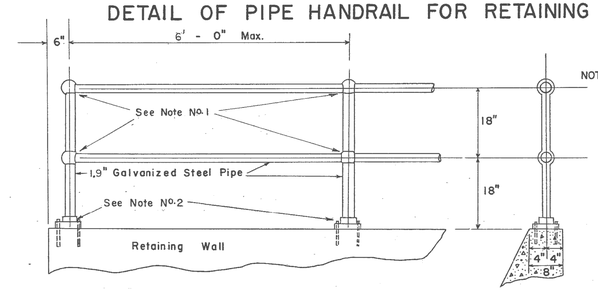
DETAIL OF RAMP TYPE BARRICADE



Reqd. 34 Cu. Yds. Ramp(min.)

NOTE: Materials and construction to be in accordance with Standard Specifications

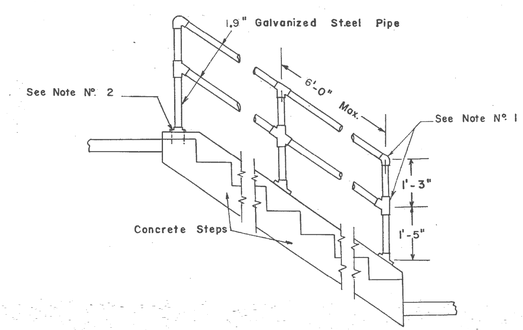
DETAIL OF PIPE HANDRAIL FOR RETAINING WALL



NOTE: If wall is long, and expansion and contraction joints are used in the wall, slip joints are to be provided for in that section of handrailing over the expansion or contraction joint. Stripping the threads in the part of the ball fittings where required to form a slip joint will be permitted.

NOTE: Pipe, pipe fittings, floor flanges and bolts shall be of an approved standard type.

DETAIL OF PIPE HANDRAIL FOR CONCRETE STEPS



NOTE: PIPE, FITTINGS, FLANGES AND BOLTS SHALL BE OF AN APPROVED STANDARD TYPE.

NOTES FOR PIPE HANDRAILING

1. JOINTS —
   a.) Standard or Special galvanized steel or galvanized iron fittings may be used at joints (as shown).
   — OR —
   b.) Joints may be welded. If welded, all exposed joints shall be finished by grinding or filling to give a neat appearance. All damage to galvanizing shall repaired in accordance with the Ga. Standard Specifications.
2. FOOTINGS —
   a.) Post may be anchored with 2½" x 6½" galvanized Floor Flanges with 4 — ½" x 9" galvanized bolts (as shown).
   — OR —
   b.) Post may be grouted in 6" deep, 3" diam. hole. Total length of post will be 6" greater than that in details to give same useable height as if Floor Flanges were used.
3. 1.9" (galv. steel pipe) denotes O.D. for rail sections. I.D. = 1½".

Designated 1.9" O.D. Handrail 10-11-88

BY	REVISIONS	DATE
R.M.U.	Add Conc. Steps, Detail B	11-25-75
R.M.U.	Handrail for Conc. Steps	2-11-76
R.M.U.	Rev. Handrailing	2-10-78
R.M.U.	Ramp detail - Rem. Sprig.	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD CONSTRUCTION DETAILS

PLACING ROOF DRAIN PIPE UNDER SIDEWALK
RAMP TYPE BARRICADE
PIPE HANDRAIL FOR RETAINING WALL
PIPE HANDRAIL FOR CONCRETE STEPS

NO SCALE — REVISED: FEB., 1966

DESIGNED:
DRAWN: A.V.S.
TRACED: A.V.S.
CHECKED: R.B.S.

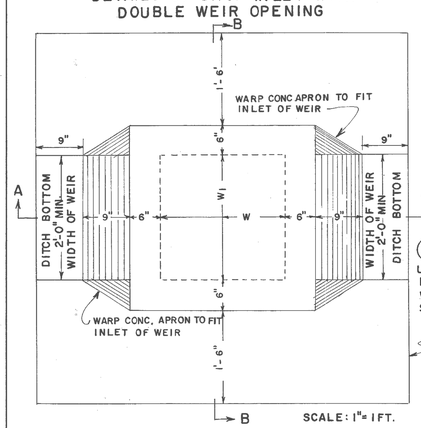
SUBMITTED: John M. Williams Jr. STATE ROAD DESIGN ENGINEER
APPROVED: [illegible] STATE HIGHWAY ENGINEER

NUMBER 9031R

Dietzgen N. O. 135 "Imperial"

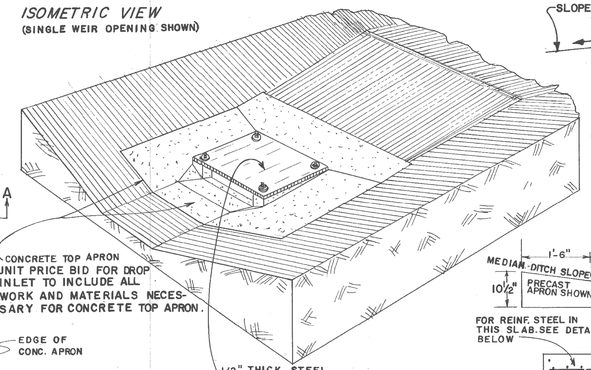
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	175	241

DETAILS OF DROP INLET WITH DOUBLE WEIR OPENING



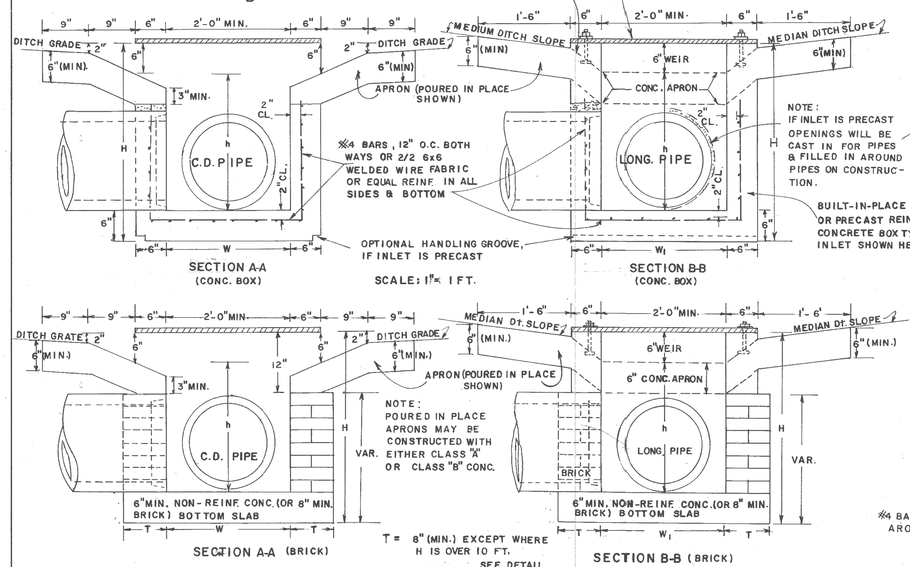
SCALE: 1" = 1 FT.

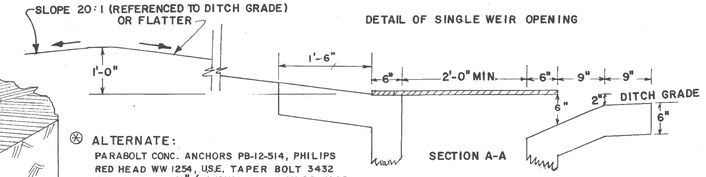
ISOMETRIC VIEW
(SINGLE WEIR OPENING SHOWN)



CONCRETE TOP APRON UNIT PRICE BID FOR DROP INLET TO INCLUDE ALL WORK AND MATERIALS NECESSARY FOR CONCRETE TOP APRON.

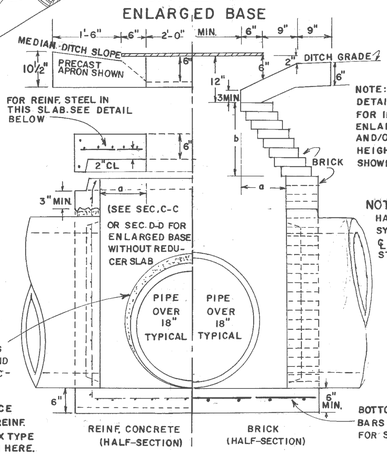
1/2" THICK STEEL PLATE BOLTED AT EACH CORNER WITH 1/2" x 6" ⊗ BOLT, NUT, AND WASHER. BOLT, NUT AND WASHER GALVANIZED ACCORDING TO A.S.T.M. A-153.





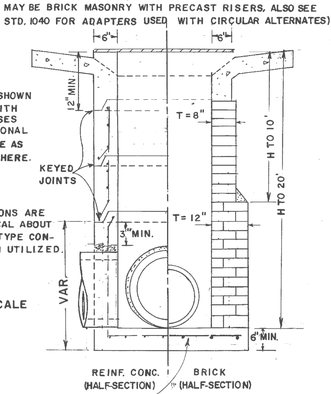
⊗ ALTERNATE: PARABOLT CONC. ANCHORS PB-12-514, PHILIPS RED HEAD WW 1254, U.S.E. TAPER BOLT 3432 OR AN EQUAL 1/2" ø ANCHOR BOLT MAY BE USED TO SECURE THE STEEL PLATE.

DROP INLET WITH ENLARGED BASE



NOTE: DETAILS NOT SHOWN FOR INLETS WITH ENLARGED BASES AND/OR ADDITIONAL HEIGHT WILL BE AS SHOWN ELSEWHERE.

DROP INLET WITH ADDITIONAL HEIGHT
(DETAILS SHOWN ARE TYPICAL BOX ENCLOSURE FOR PIPE MAY BE BRICK MASONRY WITH PRECAST RISERS. ALSO SEE STD. 1040 FOR ADAPTERS USED WITH CIRCULAR ALTERNATES).



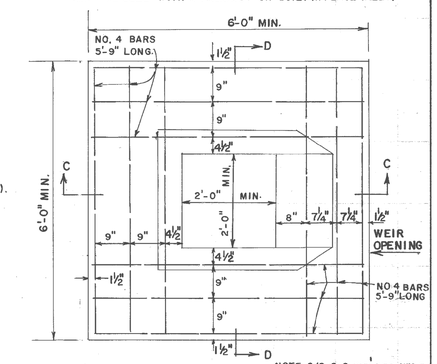
NOTE: HALF-SECTIONS ARE SYMMETRICAL ABOUT ℄ OF THE TYPE CONSTRUCTION UTILIZED.

NO SCALE

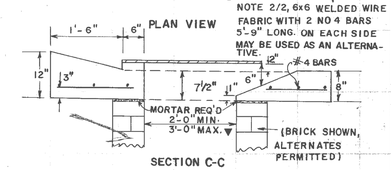
BOTTOM SLAB REINF. NO. 4 BARS @ 12" O.C. BOTH WAYS FOR STRUCTURES SHOWN HERE.

BRICK WALL THICKNESS	
H	T
to 10'	8"
10' to 20'	12"
20' to 30'	16"

REINFORCING FOR OPTIONAL PRECAST APRON
(MAY BE USED WITH A PRECAST OR BUILT-IN-PLACE INLET)



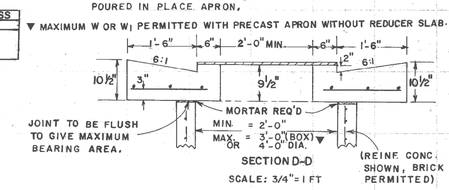
NOTE 2/2, 6x6 WELDED WIRE FABRIC WITH 2 NO. 4 BARS 5'-9" LONG. ON EACH SIDE MAY BE USED AS AN ALTERNATIVE.



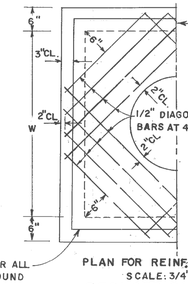
SECTION C-C

NOTE: WHEN USING PRECAST APRON, THE PLATE, BOLTS & OTHER REQUIREMENTS SHALL CONFORM TO THAT SHOWN FOR POURED IN PLACE APRON.

▼ MAXIMUM W OR W1 PERMITTED WITH PRECAST APRON WITHOUT REDUCER SLAB.



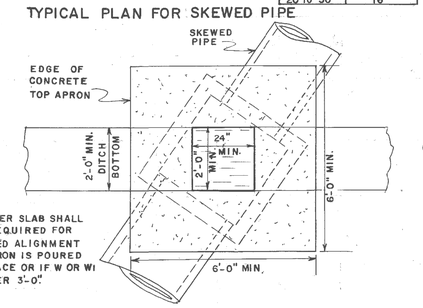
SECTION D-D
SCALE: 3/4" = 1 FT



PLAN FOR REINF. STEEL
SCALE: 3/4" = 1'-0"

REDUCER SLAB
(HALF-SECTION)

TYPICAL PLAN FOR SKEWED PIPE



NOTE: REDUCER SLAB SHALL BE REQUIRED FOR SKEWED ALIGNMENT IF APRON IS POURED IN PLACE OR IF W OR W1 IS OVER 3'-0".

GENERAL NOTES:

1. SPECIFICATIONS: GA. STANDARD, CURRENT EDITION, & SUPPLEMENTS THERETO.
2. SEE STD. 9031-L FOR ADDITIONAL DETAILS WHERE INLET IS CONSTRUCTED ON BOX CULVERT.
3. SEE STD. 1040 FOR CIRCULAR PRECAST ALTERNATES.
4. PRECAST ON BRICK MASONRY: BRICK CONSTRUCTION SHALL EXTEND 6" ± ABOVE TOP OF PIPE. JOINTS BETWEEN PRECAST & BRICK SECTIONS SHALL BE FLUSH OR CONC. FILLED TO GIVE MAX. BEARING AREA.
5. TYPICAL TREATMENT FOR SKEWED PIPES:
   (a) WITH PRECAST APRON — CONSTRUCT BOX WITH WALLS PERPENDICULAR TO PIPE AND SET PRECAST APRON PARALLEL TO DITCH AND SKEWED RELATIVE TO PIPE OR USE CIRCULAR SECTIONS (STD. 1040)
   (b) WITH BUILT-IN-PLACE APRON — CONSTRUCT BOX AS DESCRIBED IN (a) AND USE REDUCER SLAB OR INCREASE W OR W1 DIMENSIONS AS NECESSARY OR USE CIRCULAR SECTIONS (STD. 1040)

TYPICAL DROP INLET DIMENSIONS ✱ ✱

PIPE SIZE	BRICK MASONRY							REINF. CONCRETE ✱			
	MIN. W OR W1	MIN. H	MIN. h	a (MAX.)	b (MIN.)	MODIFIED MIN H	MODIFIED MIN. h	MIN. W OR W1	MIN. H	MIN. h	a (MAX)
15"	2'-0"	3'-1"	2'-1"	—	—	2'-7½"	1'-7½"	2'-0"	3'-2"	2'-2"	—
18"	2'-3"	3'-10"	2'-10"	1½"	9/16" 2/16	2'-11"	1'-11"	2'-3"	3'-5"	2'-5"	—
24"	2'-10"	4'-11"	3'-11"	5"	8⅝"	3'-6"	2'-6"	3'-0"	4'-10"	3'-10"	6"
30"	3'-5"	6'-0"	5'-0"	8½"	1'-2 11/16"	4'-1"	3'-1"	3'-6"	5'-5"	4'-5"	9"
36"	4'-0"	7'-1"	6'-1"	1'-0"	1'-8¾"	—	—	4'-0"	6'-0"	5'-0"	1'-0"
42"	4'-7"	8'-6"	7'-2"	1'-3½"	2'-2¾"	—	—	4'-6"	6'-7"	5'-7"	1'-3"
48"	5'-2"	9'-7"	8'-3	1'-7"	2'-8⅞"	—	—	5'-0"	7'-2"	6'-2"	1'-6"

✱ BUILT-IN-PLACE OR PRECAST BOX

✱ ✱ DIMENSIONS ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPE AND MAY BE VARIED IF CONDITIONS PERMIT, AND THE VARIED DIMENSIONS ARE SHOWN IN THE PLANS OR SPECIFIED BY THE ENGINEER. DIMENSIONS "a" ARE BASED UPON 2'-0" WEIR OPENING. MINIMUM H AND h ARE BASED UPON LARGEST PIPE INVOLVED. BOX ENCLOSURE FOR PIPE DOES NOT HAVE TO BE SQUARE. W AND W1 DIMENSIONS MAY DIFFER. (DIMENSIONS HAVE BEEN SPECIFIED FOR BOX SHAPED INLETS. SEE STD. 1040 FOR DIMENSIONS OF CIRCULAR ALTERNATES.)

BY	GEN. REV. REVISION	DATE
R.M.U.		4-17-86

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD MEDIAN DROP INLET
(PRECAST OR BUILT-IN-PLACE) & CONCRETE APRON

SCALE AS SHOWN — REV. & REDR. AUGUST 26, 1981

DES. 2-67 (SUBMITTED) Floyd E. Hardy
REV. R.M.U. STATE ROAD & AIRPORT DESIGN ENGR.
TRA. G.M.E. (APPROVED) Thomas D. Moseley
CHK. R.K.C. STATE HIGHWAY ENGINEER

NUMBER 9031-S

FORM EF3

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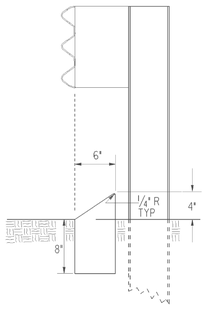
11/17/2011 8:14:31 AM \\GDOT-DSN1\GOPLOT\QCF\GO_Kip8000.qcf tcox M:\GARY\revised_9032B\9032B.prf

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	176	241

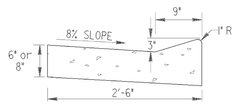
FACE OF CURB MUST ALIGN WITH BACK EDGE OF GUARDRAIL AND THE FACE OF THE OFFSET BLOCK.



TYPE 8

TYPE 8 CURB IS USED IN CONJUNCTION WITH GUARDRAIL CONNECTIONS TO CONCRETE BARRIER AS NOTED ON GA. STD. 4012C.

RAISED EDGE WITH CONCRETE GUTTER



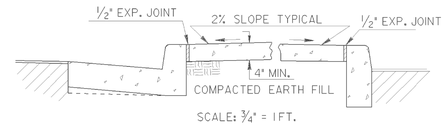
SCALE: 1" = 1FT.

RAISED EDGE TO BE CONSTRUCTED WITH SAME CONCRETE MIX AS THE GUTTER AND SHALL BE FORMED MONOLITHIC WITH GUTTER. JOINTS IN RAISED EDGE SHALL MATCH THOSE IN THE GUTTER.

NOTE:
IF CONCRETE MEDIAN INTERCEPTS PEDESTRIAN CROSSWALKS, WHEELCHAIR RAMPS (CONSTRUCTION DETAIL A-3 AND A-4) WILL BE REQUIRED.

CONCRETE MEDIAN (Between Curbs)

NOTE: CURB TYPES SHOWN ARE TYPICAL. OTHER TYPES MAY BE SPECIFIED.



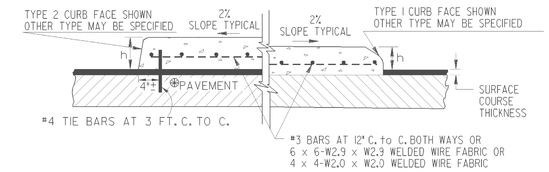
SCALE: 3/4" = 1FT.

NOTE: WIDTH OF CONCRETE MEDIAN WILL BE AS SHOWN IN PLANS

CONCRETE MEDIANS (Integral)

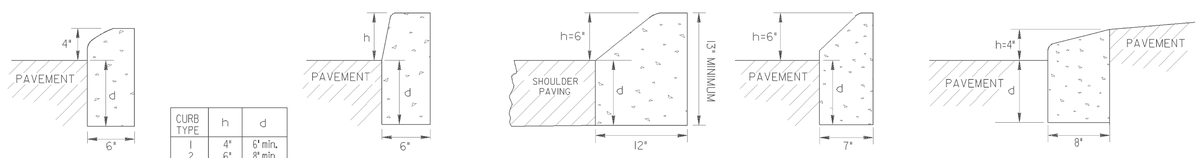
SCALE: 1"=1FT.

-WITH TIE BARS- -WITHOUT TIE BARS-



NOTE:
IF FINAL SURFACE COURSE IN PRESENT OR MUST BE INSTALLED BEFORE THE CONCRETE MEDIAN CAN BE INSTALLED, THEN DOWELED IN CONCRETE MEDIAN IS REQUIRED.

CONCRETE HEADER CURBS



TYPE 1 TYPE 2, 3 OR 4 TYPE 6 TYPE 7 TYPE 9

TRUCK APRON IN ROUNDABOUTS

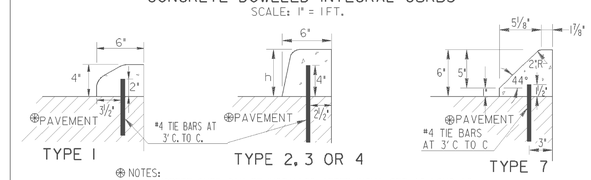
CURB TYPE	h	d
1	4"	6" min.
2	6"	8" min.
3	8"	10" min.
4	10"	12" min.
6	6"	7" min.
7	6"	8" min.
9	4"	8" min.

THE DIMENSION d MAY BE INCREASED AT CONTRACTOR'S OPTION SO BOTTOM OF HEADER CURB WILL ALIGN WITH BOTTOM OF PAVEMENT TYPICAL SECTION.

SCALE: 1 1/2" = 1FT.

CONCRETE DOWELED INTEGRAL CURBS

SCALE: 1" = 1FT.



TYPE 1 TYPE 2, 3 OR 4 TYPE 7

⊕ NOTES:
1. CONCRETE CURB CAN BE INSTALLED AFTER INITIAL SET AS LONG AS TIE BARS ARE DRILLED INTO UNDERLAYING CONCRETE PAVEMENT.
2. CONCRETE CURB CAN BE INSTALLED BEFORE INITIAL SET WITH DOWELS THAT ARE DRIVEN INTO UNDERLYING CONCRETE PAVMENT.
3. JOINTS IN CURB AND CONCRETE MEDIAN WILL MATCH THOSE IN THE CONCRETE PAVEMENT.
4. ALL TYPES OF CONCRETE CURB CAN BE PLACED ON ASPHALT PAVEMENTS WHERE TIE BARS MAY BE EITHER DRIVEN OR DRILLED INTO THE UNDERLYING PAVEMENT. CONTRACTION JOINTS SHALL BE CONSTRUCTED IN CURB OR CONCRETE MEDAIN AT 20 FT. SPACING.

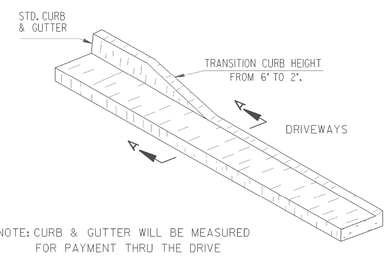
MINIMUM TIE BAR LENGTHS (FOR CONC. DOWELED CURBS OR CONC. MEDIAN)		
CURB TYPE	P.C. CONC. PAV.	ASPHALT PAV.
1	6"	8"
2, 3 or 4	8"	12"
7	6"	8"

NOTE:
TIE BARS FOR DOWELED CURBS MAY BE UNCOATED PLAIN OR DEFORMED BILLET-STEEL BARS (GRADE 40) AS USED FOR CONCRETE REINFORCEMENT. (AASHTO M-31)

DETAILS OF RECESSED CURB FOR DRIVEWAYS

NO SCALE

PICTORIAL VIEW

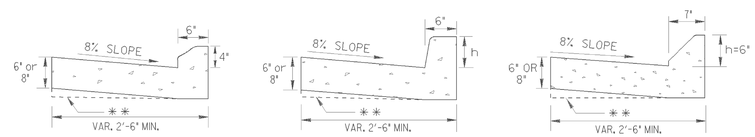


NOTE: CURB & GUTTER WILL BE MEASURED FOR PAYMENT THRU THE DRIVE

SECTIONAL VIEW
SECTION A-A

(SEE SEPARATE CONSTRUCTION DETAILS FOR DRIVEWAYS)

CONCRETE CURB & GUTTER

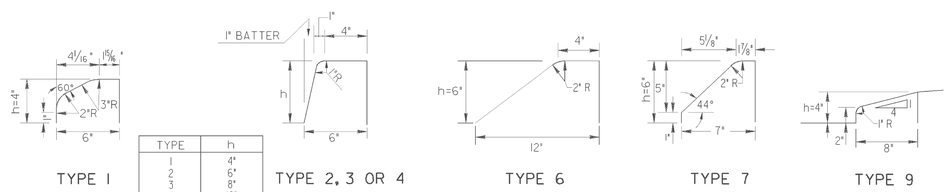


SCALE: 1"= 1FT.

TYPE 1 TYPE 2, 3 OR 4 TYPE 7

** AT CONTRACTOR'S OPTION THE GUTTER THICKNESS MAY BE INCREASED AT EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER PARALLEL WITH PAVING OF BASE COURSE, BUT THE GUTTER THICKNESS MUST NOT BE LESS THAN THE SPECIFIED 6" OR 8" AT ANY POINT.

CURB FACE DESIGN

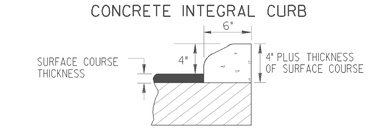


TYPE 1 TYPE 2, 3 OR 4 TYPE 6 TYPE 7 TYPE 9

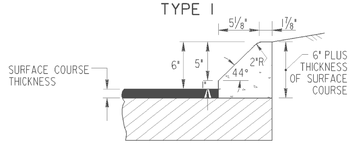
TYPE	h
1	4"
2	6"
3	8"
4	10"
6	6"
7	6"
9	4"

SCALE: 2"=1FT.

CONCRETE INTEGRAL CURB



TYPE 1



TYPE 7

SCALE: 1 1/2" = 1FT.

BY	REVISION	DATE
TC	REV. TYPE 9 CURB DETAIL & REV. OVERALL LAYOUT	11-15-11
GLO	REV. MEDIAN NOTE AND ADDED TYPE 9 CURB DETAIL	1-27-11
	ADDED TYPE 9 DETAIL	3-03

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CONCRETE CURB & GUTTER
CONCRETE CURBS, CONCRETE MEDIANS

SCALE: AS SHOWN REVISED AND REDRAWN OCT. 2011

DES. ____ DRW. ____ TRA. ____ CHK. ____

(SUBMITTED) STATE DESIGN POLICY ENGINEER

(APPROVED) Donald M. Rowe CHIEF ENGINEER

NUMBER 9032B

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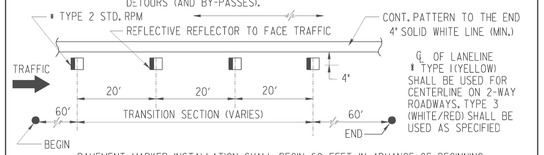
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	177	241

TEMPORARY RAISED PAVEMENT MARKER DETAIL

INSTALLATION PATTERN FOR LATERAL MAINLINE SHIFTS AND CROSSOVER OPERATIONS. ALSO APPLICABLE FOR DETOURS (AND BY-PASSES).



PAVEMENT MARKER INSTALLATION SHALL BEGIN 60 FEET IN ADVANCE OF BEGINNING OF THE SHIFT OR TRANSITION ALIGNMENT, CONTINUE THRU THE TRANSITION AREA, & EXTEND 60 FEET BEYOND THE INTERSECTION WITH THE TEMPORARY ALIGNMENT. TEMPORARY RAISED PAVEMENT MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND THE GA. STD. SPECIFICATIONS.

STANDARD LEGEND

- STRIPED DRUM
- TYPE III BARRICADES
- SPECIAL BARRICADE WITH BI-DIRECTIONAL, TYPE 'C' STEADY BURNING LIGHT OR HIGHWAY SIGN AS SPECIFIED (SEE DETAIL)
- SEQUENTIAL OR FLASHING ARROW
- PORTABLE CHANGEABLE MESSAGE SIGN
- PERMANENT TYPE POST MOUNTED SIGN
- TEMPORARY POST MOUNTED SIGN
- PORTABLE MOUNTED SIGN - FLAGS NOT REQUIRED
- WORK AREA
- TRAFFIC CONE - 28" MIN. - (DAYTIME USE ONLY)
- FLAGGER WITH STOP-SLOW PADDLE
- TRAFFIC IMPACT ATTENUATOR (CRASH CUSHION)
- TYPE I CLEAR (WHITE) DELINEATOR - SINGLE FACE
- TYPE I YELLOW DELINEATOR - SINGLE FACE
- TYPE I CLEAR (WHITE) DELINEATOR DOUBLE FACE
- TYPE I YELLOW DELINEATOR DOUBLE FACE

GENERAL NOTES :

1. ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS; THE MUTCD; THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150)
2. ALL TRAFFIC CONTROL DEVICES SHALL BE AS SHOWN, OR AS DIRECTED BY THE ENGINEER. ADDITIONAL DEVICES MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
3. ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF 1FOOT ABOVE THE LEVEL OF PAVEMENT EDGE FOR DIRECTIONAL TRAFFIC OF TWO (2) LANES OR LESS AND A MINIMUM OF 7 FEET FOR DIRECTIONAL OF THREE (3) OR MORE LANES. ALL PORTABLE SIGNS AND SIGN MOUNTING DEVICES UTILIZED IN THE WORK SHALL BE NCHRP 350 COMPLIANT. PORTABLE SIGNS MAY BE USED WHEN THE DURATION OF THE WORK IS LESS THAN 3 DAYS.
4. WHEN THE CONSTRUCTION AREA HAS ENTRANCE/EXIT RAMPS OR INTERSECTIONS, WORK WILL BE PERFORMED IN SUCH A MANNER TO PERMIT TRAFFIC TO OPERATE WITH THE LEAST AMOUNT OF INCONVENIENCE AS POSSIBLE. ADDITIONAL CHANNELIZATION AND SIGNING SHALL BE INSTALLED, AS REQUIRED, TO ALLOW TRAFFIC TO REMAIN AS OPERATIONAL AS POSSIBLE. WHEN ENTRANCE RAMPS/INTERSECTIONS ARE INOPERABLE, FLAGGERS WILL BE UTILIZED TO CONTROL AND PROHIBIT MOVEMENT INTO THE PROJECT AT THAT POINT UNTIL CONSTRUCTION HAS CLEARED THE RESTRICTION SUFFICIENT TO RETURN TO OPERATIONAL STATUS.
5. FOR NIGHT TIME OPERATIONS, DRUMS SHALL HAVE, FOR THE LENGTH OF THE TAPER ONLY, A SIX (6") INCH ORANGE REFLECTIZED TOP STRIPE ON EACH DRUM IN THE TAPER AS REQUIRED IN SECTION 150. SPACING OF DEVICES SHALL BE AS SHOWN. DURING DAYLIGHT HOURS, CONES (28" MIN.) MAY BE USED IN ADVANCE OF AND THROUGHOUT WORK AREA.
6. SIGN LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS BUT MUST BE WITHIN THE LIMITATIONS SET FORTH IN THE MUTCD.
7. A PORTABLE SELF-SUSTAINED SEQUENTIAL OR FLASHING ARROW SIGN SHALL BE USED AT THE BEGINNING OF EACH LANE CLOSURE ON MULTI-LANE HIGHWAYS. ARROW PANELS SHALL NOT BE USED ON TWO-LANE TWO-WAY HIGHWAYS EXCEPT IN CAUTION MODE.
8. WHEN NOT IN USE, PORTABLE SIGNS SHALL BE REMOVED FROM THE TRAVELWAY SO THAT THE MESSAGE IS NOT VISIBLE TO THE MOTORIST. INTERIM SIGNS THAT ARE PERMANENTLY MOUNTED SHALL BE COVERED WHEN NOT APPLICABLE. SEE SECTION 150.
9. PROJECT SIGNS W20-1, G20-1 & G20-2 FOR THIS PROJECT SHALL BE COORDINATED WITH ADJACENT CONSTRUCTION PROJECTS. ONLY ONE SET OF SIGNS IS REQUIRED IN EACH DIRECTION FOR THE TOTAL LENGTH OF ALL PROJECTS- AT THE BEGINNING OF THE FIRST PROJECT AND AT THE ENDING OF THE LAST PROJECT. ADVANCE CONSTRUCTION SIGNS ARE NOT REQUIRED ON INTERMEDIATE PROJECTS, UNLESS CONSTRUCTION ON THE ADJACENT PROJECTS IS COMPLETED BEFOREHAND, THEN PROJECT CONSTRUCTION SIGNS WILL BE ADDED AS NECESSARY.
10. ALL THE COST OF THE MATERIALS, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE PRICE BID FOR TRAFFIC CONTROL SECTION 150, LUMP SUM, WHEN SHOWN AS A PAYMENT ITEM IN THE PROPOSAL. OTHERWISE, ALL THE COST WILL BE INCLUDED IN THE OVER-ALL BID SUBMITTED. EXCEPT ON CERTAIN PROJECTS SOME ITEMS MAY BE PAID FOR SEPARATELY BY THE UNIT WHEN SPECIFIED ON THE PLANS AND IN THE PROPOSAL.
11. FOR FREEWAY CONSTRUCTION THE CONTRACTOR SHALL ARRANGE HIS WORK SO THAT THERE IS AN EXIT GORE SIGN AND AN EXIT DIRECTION SIGN IN PLACE FOR ALL EXIT RAMPS AT ALL TIMES.
12. ALL CROSSROADS, SIDEROADS, RAMPS OR OTHER ENTRANCES TO MAINLINE CONSTRUCTION SHALL REQUIRE W20-1 SIGNS LOCATED AS SHOWN IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
13. MARKINGS AND/OR SIGNS IN CONFLICT WITH INTERIM TRAFFIC CONTROL SHALL BE REMOVED, RELOCATED OR COVERED; APPLICABLE EXISTING AND INTERIM MARKINGS AND/OR SIGNING SHALL BE MAINTAINED PER SECTION 150.
14. ANY CHANNELIZING DEVICES (DRUMS OR BARRICADES) IN CONFLICT WITH CONCRETE BARRIERS SHALL BE OMITTED.
15. CONTRACTOR SHALL PROVIDE THE NECESSARY TRAFFIC CONTROL DURING THE TIE-IN OPERATION.
16. THE TRAFFIC CONTROL DEVICES SHOWN FOR ANY STAGE CONSTRUCTION SHALL REMAIN IN PLACE AND BE UTILIZED SO LONG AS NECESSARY FOR THE FOLLOWING STAGES AND SHALL BE REMOVED IMMEDIATELY WHEN NO LONGER REQUIRED. THE DEVICES MAY OR MAY NOT BE SHOWN ON THE PLANS FOR THESE FOLLOWING STAGES. REFER TO THE PLAN SHEET FOR THE INITIAL STAGE FOR THESE TRAFFIC CONTROLS.
17. EXISTING GUIDE SIGNS SHALL REMAIN IN PLACE SO LONG AS THEY DO NOT CONFLICT WITH THE CONSTRUCTION OF THIS PROJECT. WHEN IN CONFLICT, THEY SHALL BE RELOCATED ON TEMPORARY POSTS AT THE LOCATION AS DIRECTED BY THE ENGINEER. ANY DISTANCE SHOWN ON THE SIGN SHALL BE ADJUSTED ACCORDINGLY. IF THE SIGNS CANNOT BE RELOCATED, THEN THE SIGN SHALL BE REMOVED AND STORED AT A PLACE DESIGNATED BY THE ENGINEER. IF NEITHER OF THE ABOVE CAN BE DONE, THEN THE CONTRACTOR SHALL PROVIDE INTERIM GUIDE SIGNS AS COVERED IN SECTION 150.
18. (a) ON PROJECTS WITH LOW OR SOFT SHOULDERS, THE CONTRACTOR SHALL ERECT IMMEDIATELY AHEAD OF CONSTRUCTION OPERATIONS "LOW/SOFT SHOULDER" WARNING SIGNS AT THE PROJECT TERMINII, AT INTERVALS NOT TO EXCEED 1 MILE AND IMMEDIATELY PAST EACH CROSSROAD.

    (b) WHERE THE CONTRACTOR IS NOT RESPONSIBLE FOR SHOULDER CONSTRUCTION, THE DEPARTMENT WILL FURNISH THESE SIGNS FOR THE CONTRACTOR TO PICK UP, TRANSPORT, AND ERECT. THE DEPARTMENT WILL LATER REMOVE AND RETAIN THE SIGNS.

BY	REVISION	DATE
GLO	REVISED GENERAL NOTES AND LEGEND, DELETED TWO DETAILS.	3-30-06
	SPEC. BAR. SH. SPEC.	4-24-01

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
TRAFFIC CONTROL
GENERAL NOTES, STANDARD LEGEND, MISCELLANEOUS DETAILS

NO SCALE — AUG., 1999

DES. ____ DRW. ____ TRA. ____ CHK. ____

(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGINEER
(APPROVED) CHIEF ENGINEER

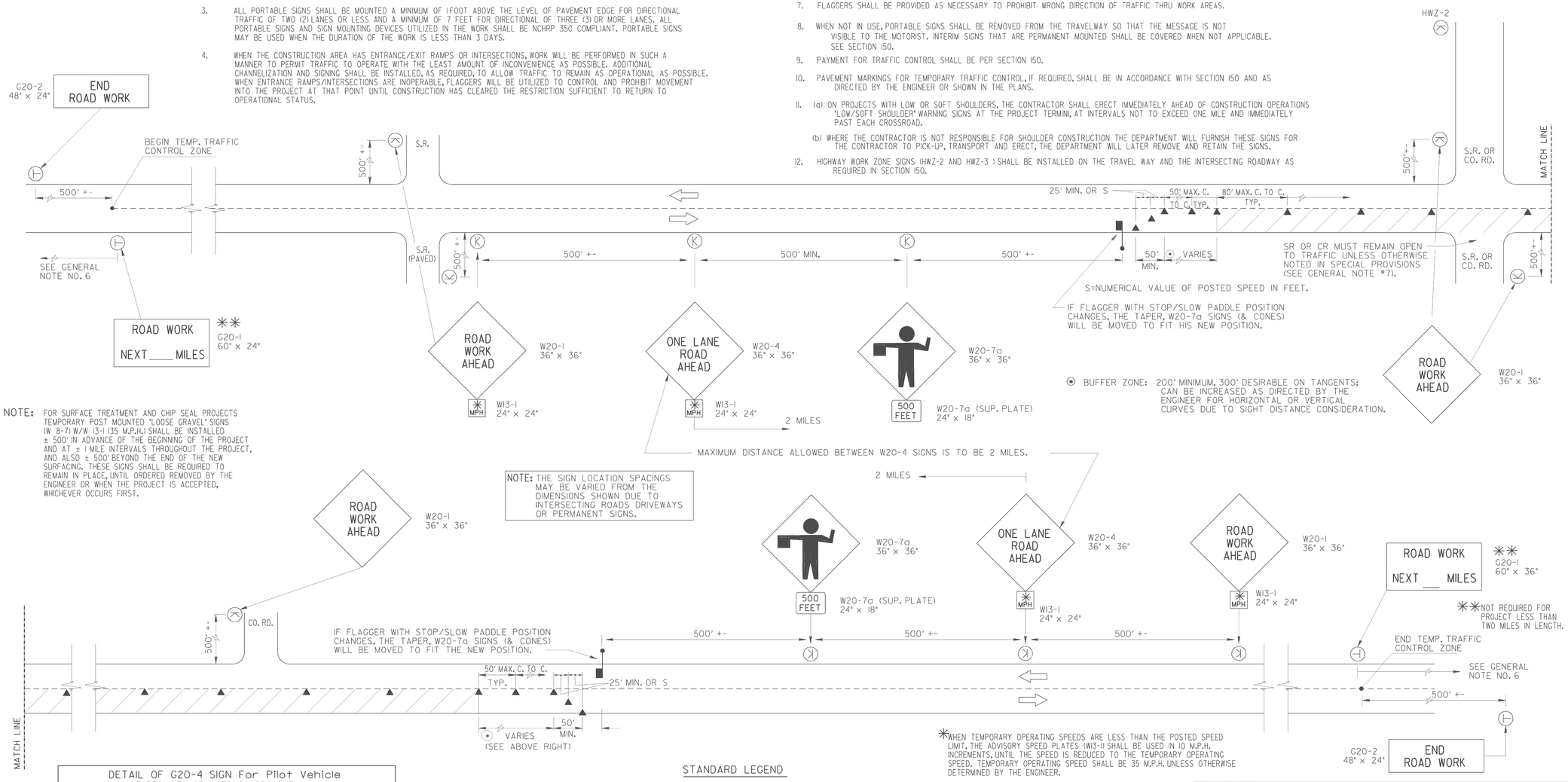
NUMBER 9100

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	178	241

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS; THE MUTCD; THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150)
2. ALL TRAFFIC CONTROL DEVICES SHALL BE AS SHOWN, OR AS DIRECTED BY THE ENGINEER. ADDITIONAL DEVICES MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
3. ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF 1FOOT ABOVE THE LEVEL OF PAVEMENT EDGE FOR DIRECTIONAL TRAFFIC OF TWO (2) LANES OR LESS AND A MINIMUM OF 7 FEET FOR DIRECTIONAL OF THREE (3) OR MORE LANES. ALL PORTABLE SIGNS AND SIGN MOUNTING DEVICES UTILIZED IN THE WORK SHALL BE NCHRP 350 COMPLIANT. PORTABLE SIGNS MAY BE USED WHEN THE DURATION OF THE WORK IS LESS THAN 3 DAYS.
4. WHEN THE CONSTRUCTION AREA HAS ENTRANCE/EXIT RAMPS OR INTERSECTIONS, WORK WILL BE PERFORMED IN SUCH A MANNER TO PERMIT TRAFFIC TO OPERATE WITH THE LEAST AMOUNT OF INCONVENIENCE AS POSSIBLE. ADDITIONAL CHANNELIZATION AND SIGNING SHALL BE INSTALLED, AS REQUIRED, TO ALLOW TRAFFIC TO REMAIN AS OPERATIONAL AS POSSIBLE. WHEN ENTRANCE RAMPS/INTERSECTIONS ARE INOPERABLE, FLAGGERS WILL BE UTILIZED TO CONTROL AND PROHIBIT MOVEMENT INTO THE PROJECT AT THAT POINT UNTIL CONSTRUCTION HAS CLEARED THE RESTRICTION SUFFICIENT TO RETURN TO OPERATIONAL STATUS.
5. FOR NIGHT TIME OPERATIONS, DRUMS SHALL HAVE, FOR THE LENGTH OF THE TAPER ONLY, A SIX (6") INCH ORANGE REFLECTIZED TOP STRIPE ON EACH DRUM IN THE TAPER AS REQUIRED IN SECTION 150. SPACING OF DEVICES SHALL BE AS SHOWN. DURING DAYLIGHT HOURS, CONES (28" MIN.) MAY BE USED IN ADVANCE OF AND THROUGHOUT WORK AREA.
6. SIGNS SHOWN HERE ARE IN ADDITION TO ALL ADVANCE WARNING SIGNS REQUIRED IN SECTION 150.
7. FLAGGERS SHALL BE PROVIDED AS NECESSARY TO PROHIBIT WRONG DIRECTION OF TRAFFIC THRU WORK AREAS.
8. WHEN NOT IN USE, PORTABLE SIGNS SHALL BE REMOVED FROM THE TRAVELWAY SO THAT THE MESSAGE IS NOT VISIBLE TO THE MOTORIST. INTERIM SIGNS THAT ARE PERMANENT MOUNTED SHALL BE COVERED WHEN NOT APPLICABLE. SEE SECTION 150.
9. PAYMENT FOR TRAFFIC CONTROL SHALL BE PER SECTION 150.
10. PAVEMENT MARKINGS FOR TEMPORARY TRAFFIC CONTROL, IF REQUIRED, SHALL BE IN ACCORDANCE WITH SECTION 150 AND AS DIRECTED BY THE ENGINEER OR SHOWN IN THE PLANS.
11. (a) ON PROJECTS WITH LOW OR SOFT SHOULDERS, THE CONTRACTOR SHALL ERECT IMMEDIATELY AHEAD OF CONSTRUCTION OPERATIONS "LOW/SOFT SHOULDER" WARNING SIGNS AT THE PROJECT TERMINI, AT INTERVALS NOT TO EXCEED ONE MILE AND IMMEDIATELY PAST EACH CROSSROAD.

    (b) WHERE THE CONTRACTOR IS NOT RESPONSIBLE FOR SHOULDER CONSTRUCTION THE DEPARTMENT WILL FURNISH THESE SIGNS FOR THE CONTRACTOR TO PICK-UP, TRANSPORT AND ERECT, THE DEPARTMENT WILL LATER REMOVE AND RETAIN THE SIGNS.
12. HIGHWAY WORK ZONE SIGNS (HWZ-2 AND HWZ-3) SHALL BE INSTALLED ON THE TRAVEL WAY AND THE INTERSECTING ROADWAY AS REQUIRED IN SECTION 150.

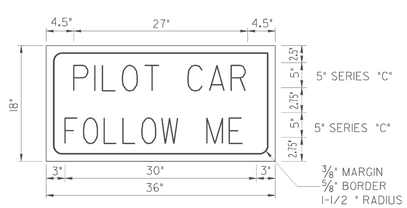


NOTE: FOR SURFACE TREATMENT AND CHIP SEAL PROJECTS TEMPORARY POST MOUNTED "LOOSE GRAVEL" SIGNS (W 8-7) W/W 13-1 (35 M.P.H.) SHALL BE INSTALLED ± 500' IN ADVANCE OF THE BEGINNING OF THE PROJECT AND AT ± 1 MILE INTERVALS THROUGHOUT THE PROJECT, AND ALSO ± 500' BEYOND THE END OF THE NEW SURFACING. THESE SIGNS SHALL BE REQUIRED TO REMAIN IN PLACE, UNTIL ORDERED REMOVED BY THE ENGINEER OR WHEN THE PROJECT IS ACCEPTED, WHICHEVER OCCURS FIRST.

NOTE: THE SIGN LOCATION SPACINGS MAY BE VARIED FROM THE DIMENSIONS SHOWN DUE TO INTERSECTING ROADS DRIVEWAYS OR PERMANENT SIGNS.

*WHEN TEMPORARY OPERATING SPEEDS ARE LESS THAN THE POSTED SPEED LIMIT, THE ADVISORY SPEED PLATES (W13-1) SHALL BE USED IN 10 M.P.H. INCREMENTS, UNTIL THE SPEED IS REDUCED TO THE TEMPORARY OPERATING SPEED. TEMPORARY OPERATING SPEED SHALL BE 35 M.P.H. UNLESS OTHERWISE DETERMINED BY THE ENGINEER.

DETAIL OF G20-4 SIGN For Pilot Vehicle
IF REQUIRED OR USED ON PROJECT



STANDARD LEGEND

- STRIPED DRUM
- PERMANENT TYPE POST MOUNTED SIGN (7' MOUNT HEIGHT)
- TEMPORARY POST MOUNTED SIGN - (7' MOUNT HEIGHT)
- PORTABLE MOUNTED SIGN - MINIMUM HEIGHT OF 1FT. ABOVE THE EDGE OF PAVEMENT; INSTALLED AS PER NCHRP 350 TESTING REQUIREMENTS.
- WORK AREA
- TRAFFIC CONE - 28" MIN. - DAYTIME USE ONLY
- FLAGGER WITH STOP-SLOW PADDLE

BY	REVISION	DATE
GLO	REMOVED FLAGS AND REV. GENERAL NOTES, REV. SIGN G20-2A TO G20-2.	3-30-06

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD TRAFFIC CONTROL DETAIL FOR LANE CLOSURE ON TWO-LANE HIGHWAY

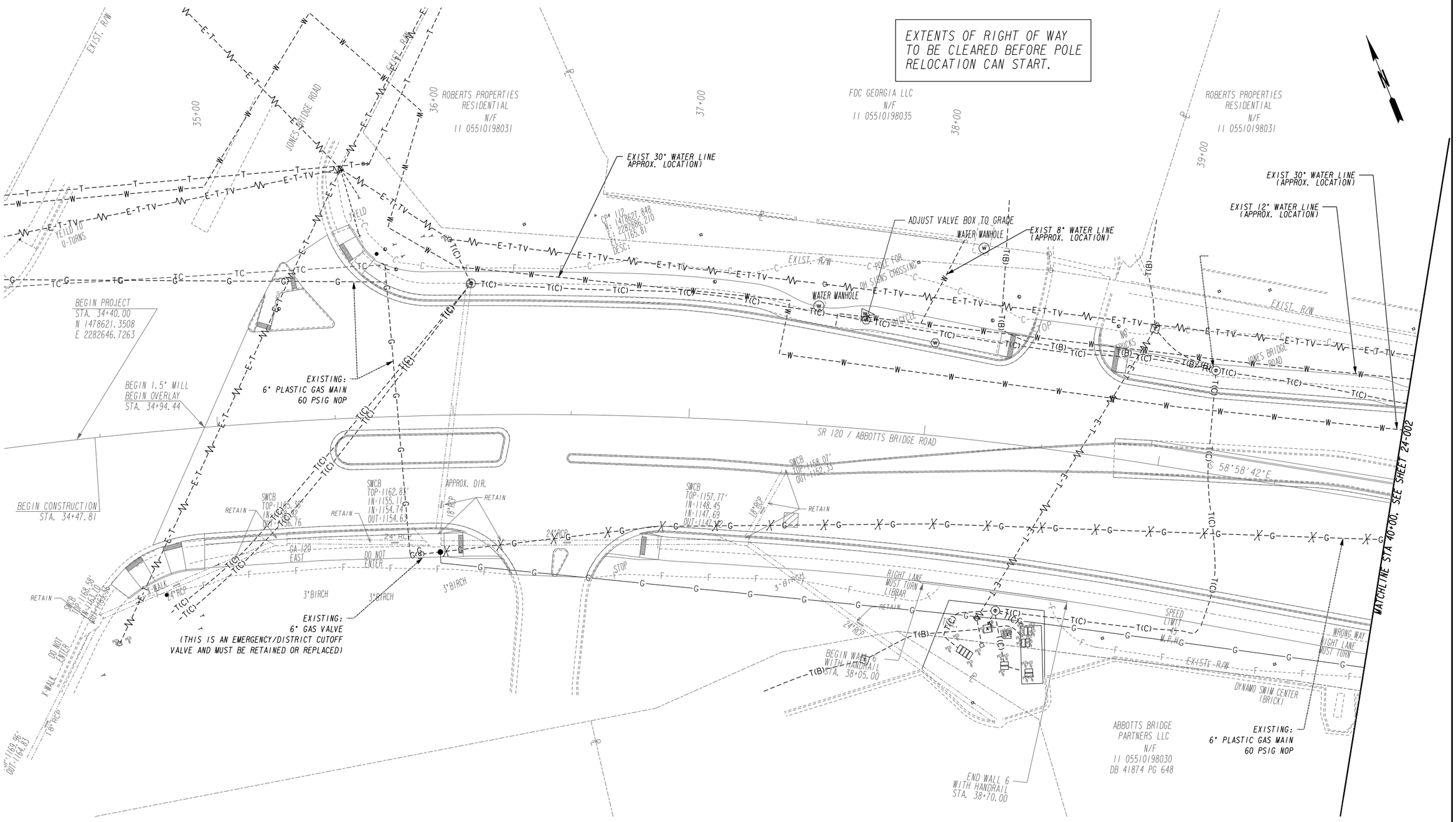
NO SCALE — REV. & REDR. JULY, 1999

DES. ____ DRW. ____ TRA. ____ CHK. ____

(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGINEER

(APPROVED) CHIEF ENGINEER

NUMBER 9102



Johns Creek

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REVISION DATES		

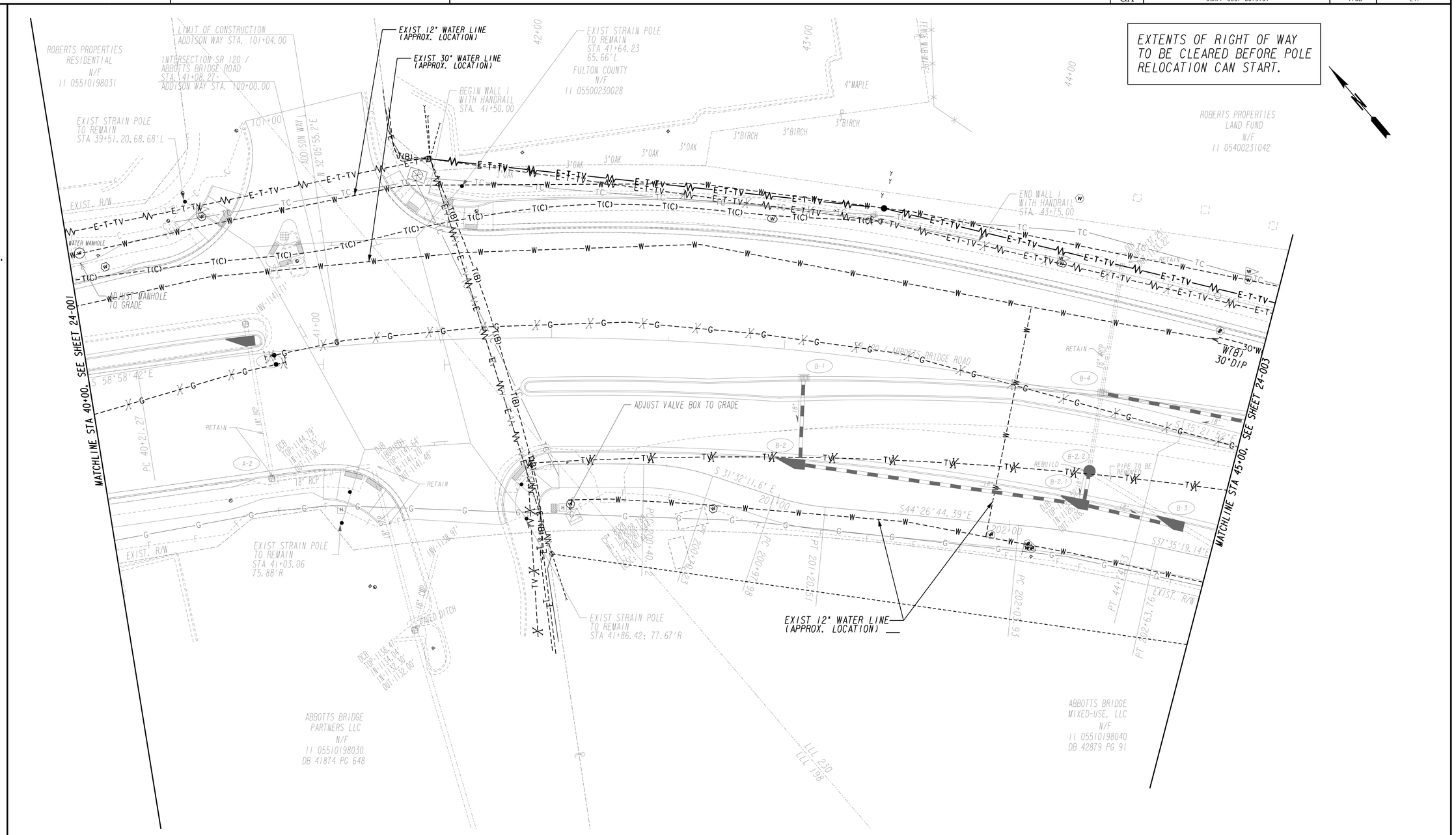
CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 44-001

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	178B	241



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SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
44 -002

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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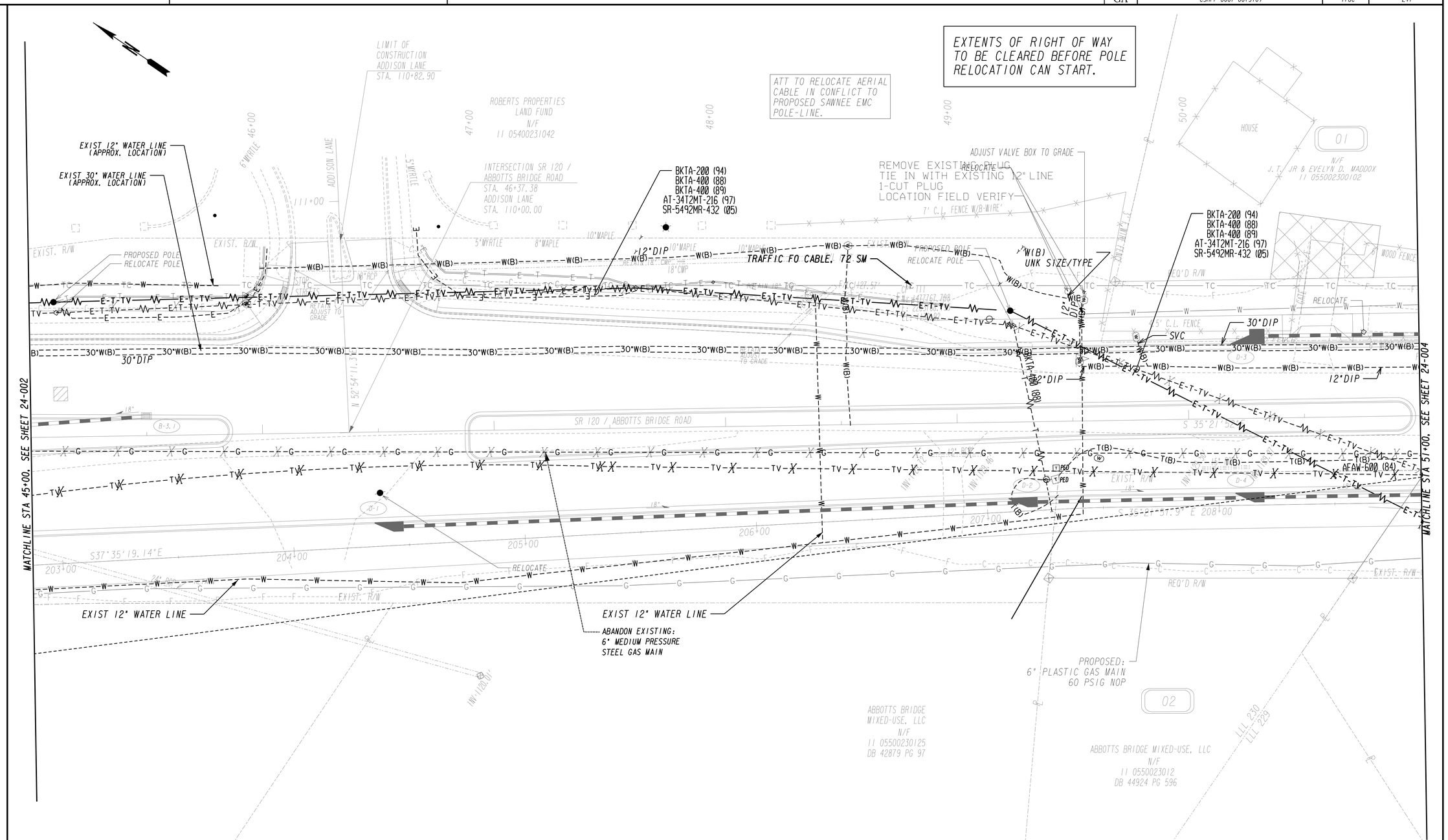

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SCALE IN FEET
0 20 40 80

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

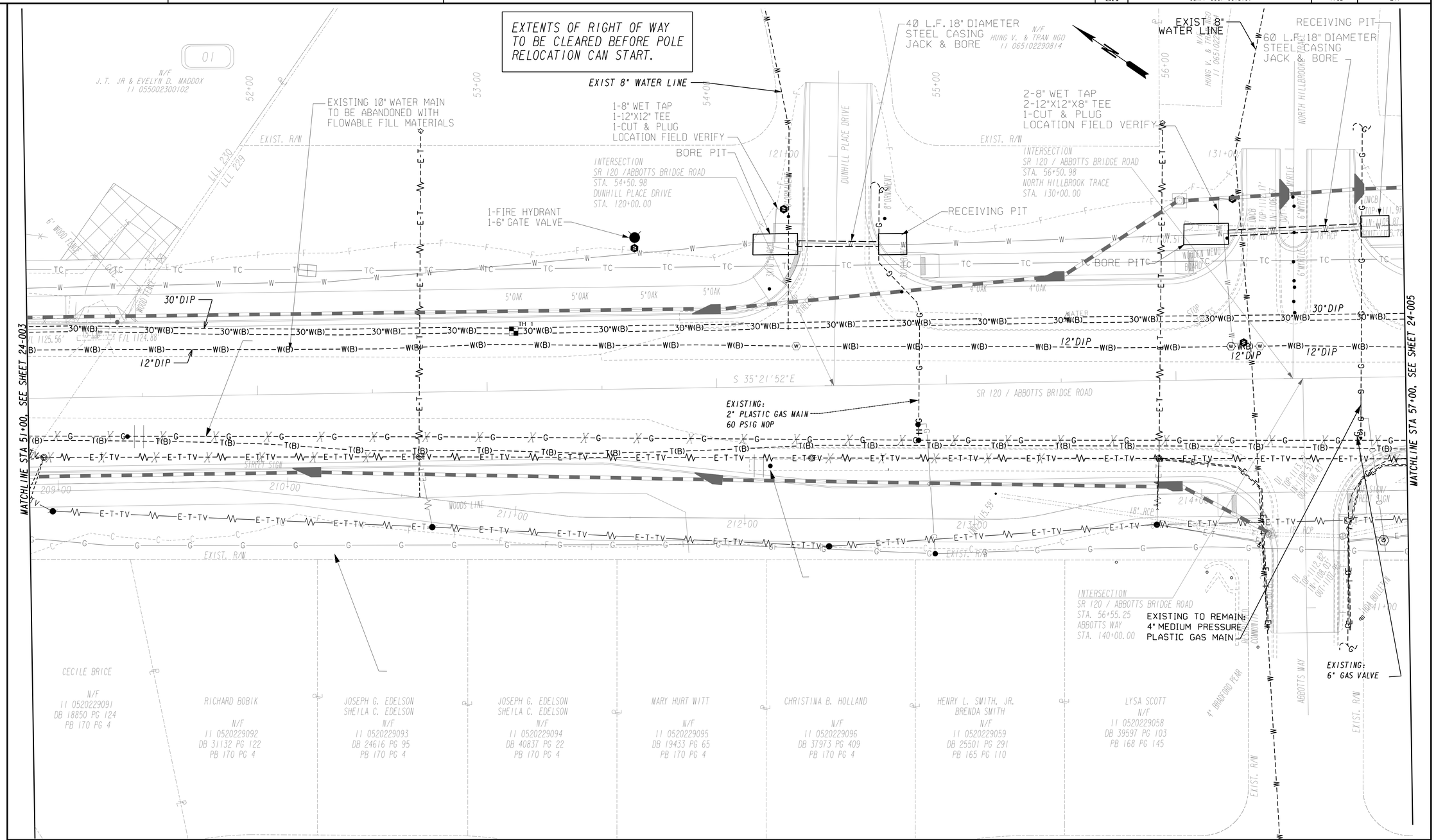
WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 44 -003

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	178D	241



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SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
44 -004

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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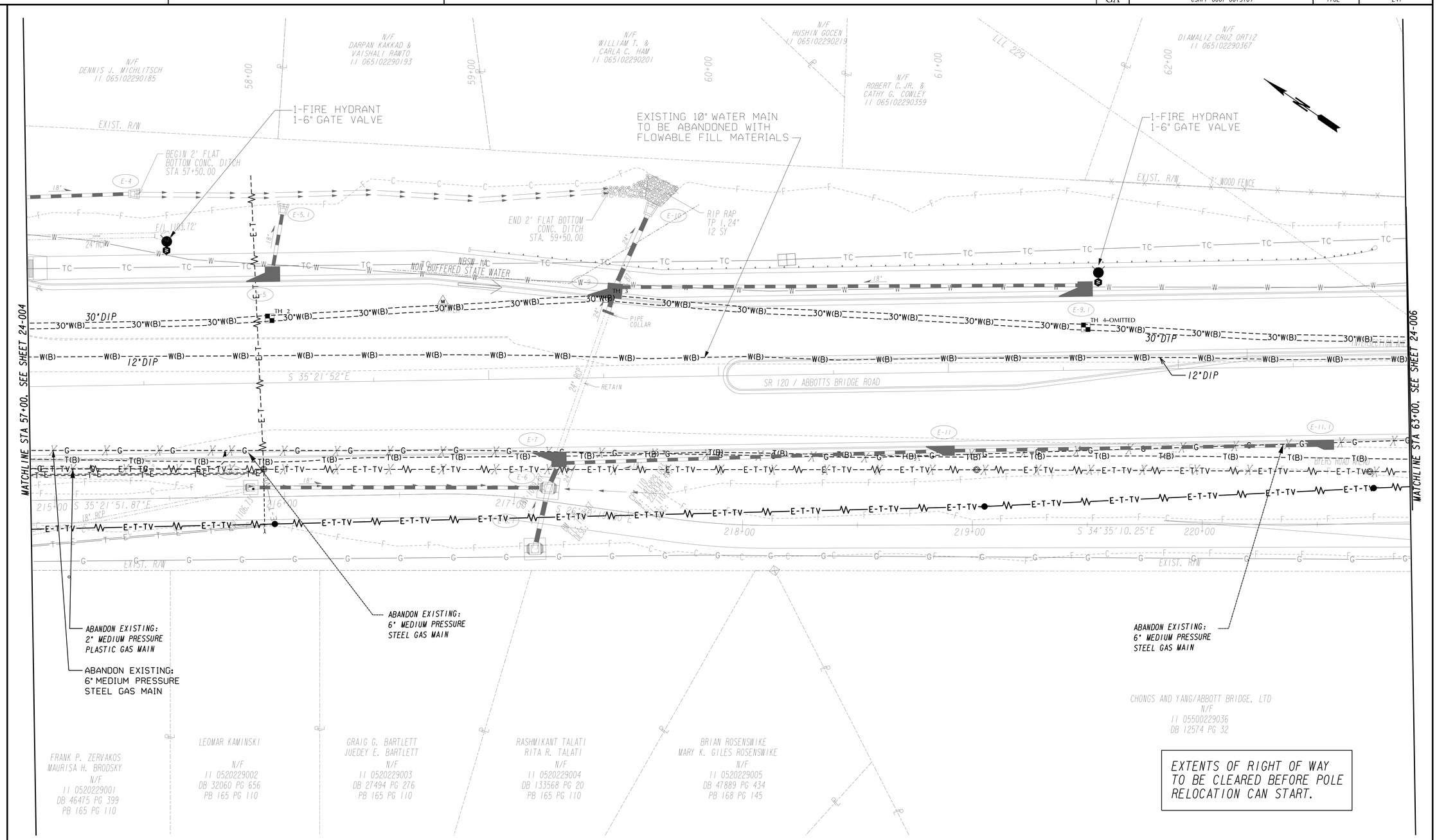

EXTENTS OF RIGHT OF WAY TO BE CLEARED BEFORE POLE RELOCATION CAN START.

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SCALE IN FEET
0 20 40 80

REVISION DATES

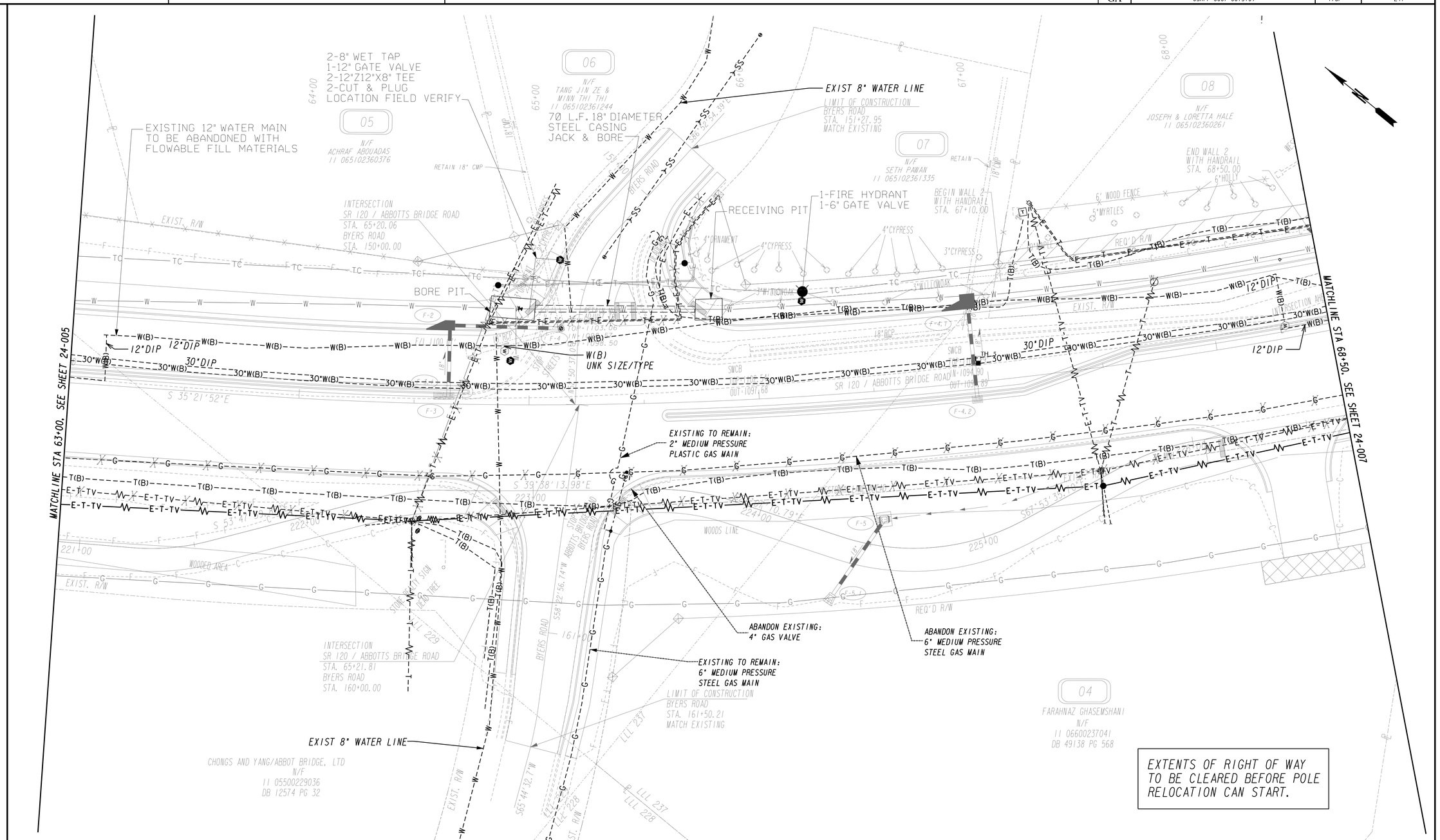
CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
44 -005

3/1/2007 GPLN



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SCALE IN FEET
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REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

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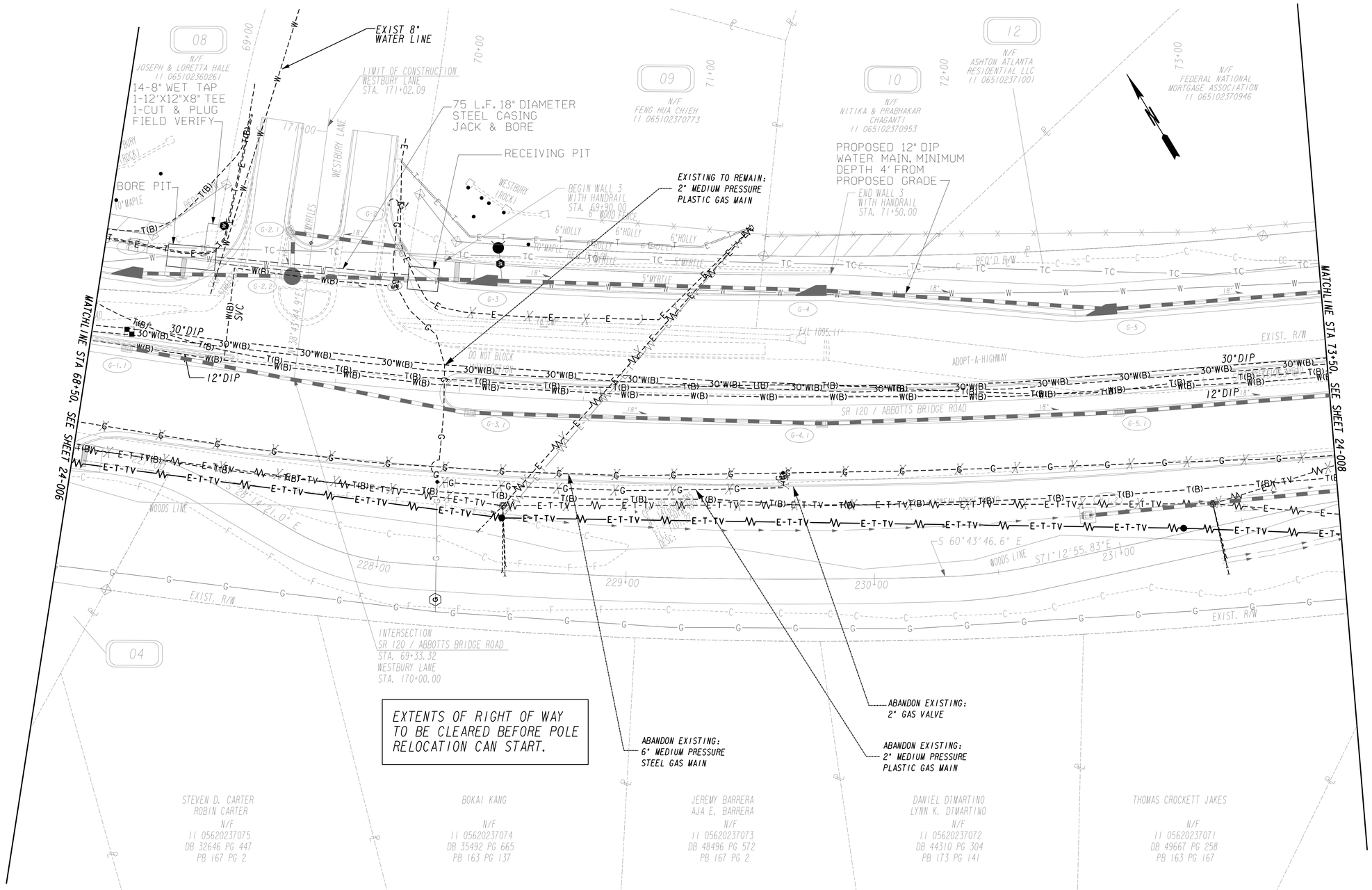
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
44 -006

3/1/2007 GPLN



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SCALE IN FEET
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REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

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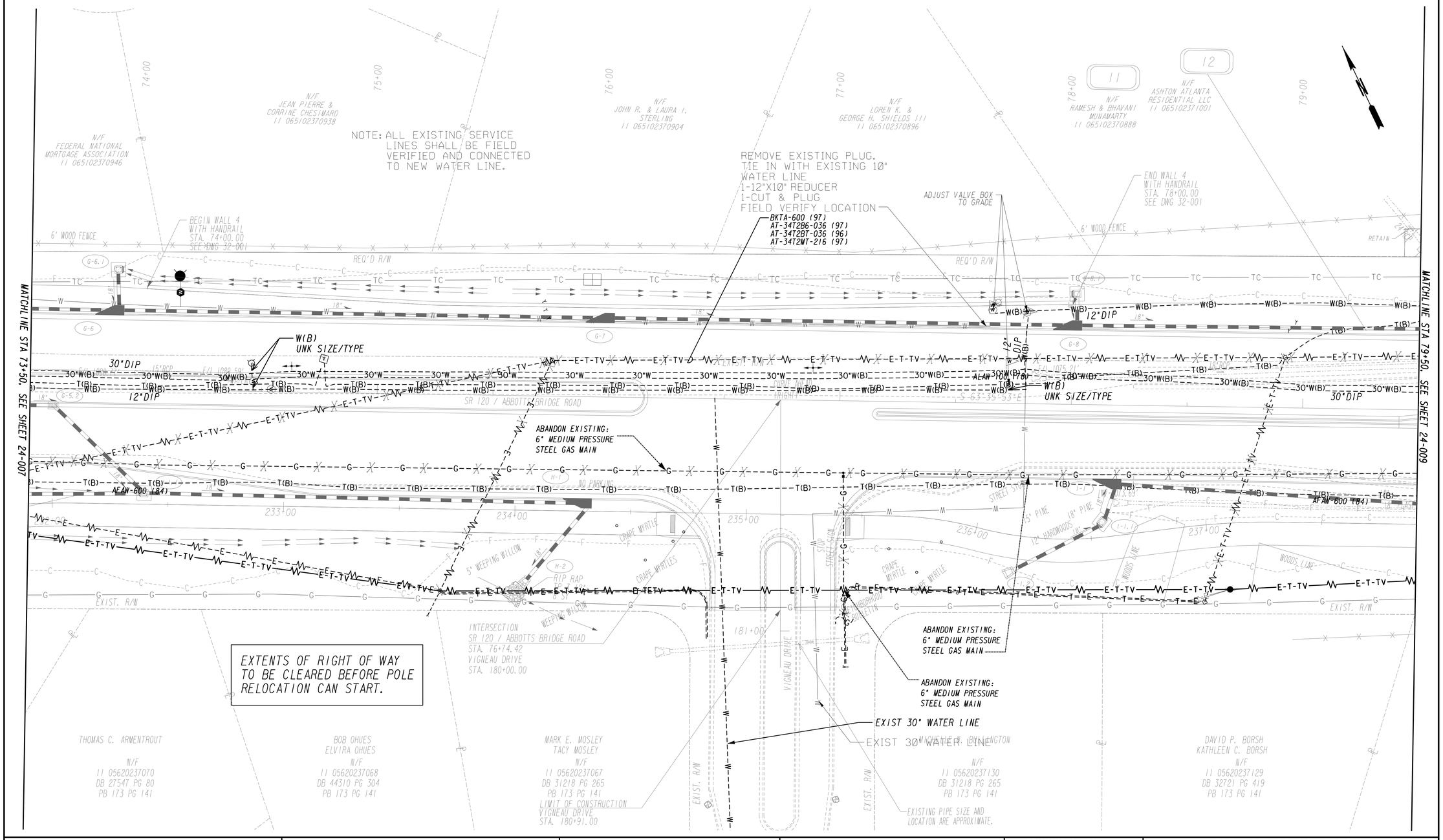
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 44 -007

3/1/2007 GPLN



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SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

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SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
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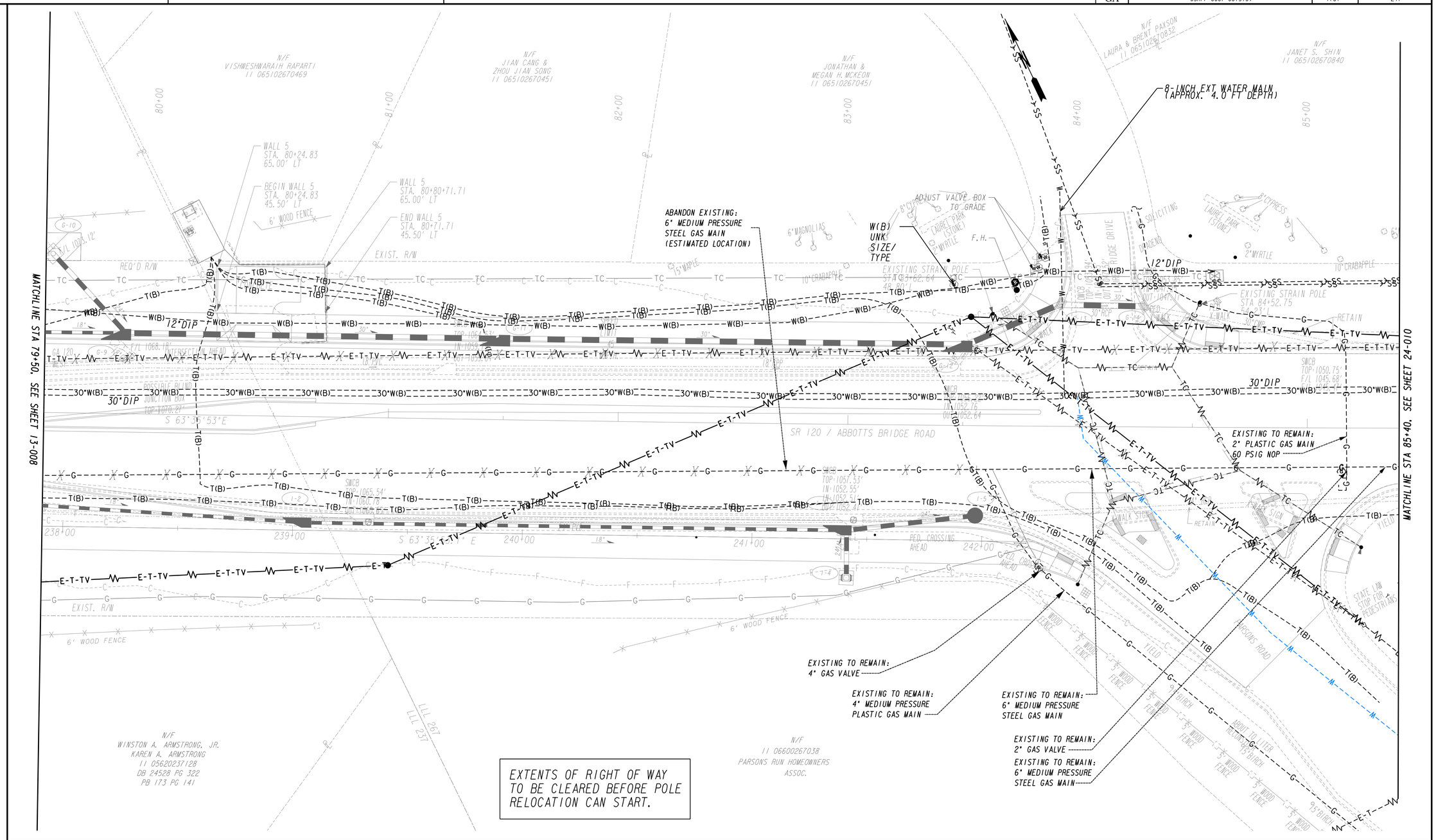
DRAWING No. 44 -008

3/1/2007 GPLN



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SCALE IN FEET
0 20 40 80

REVISION DATES

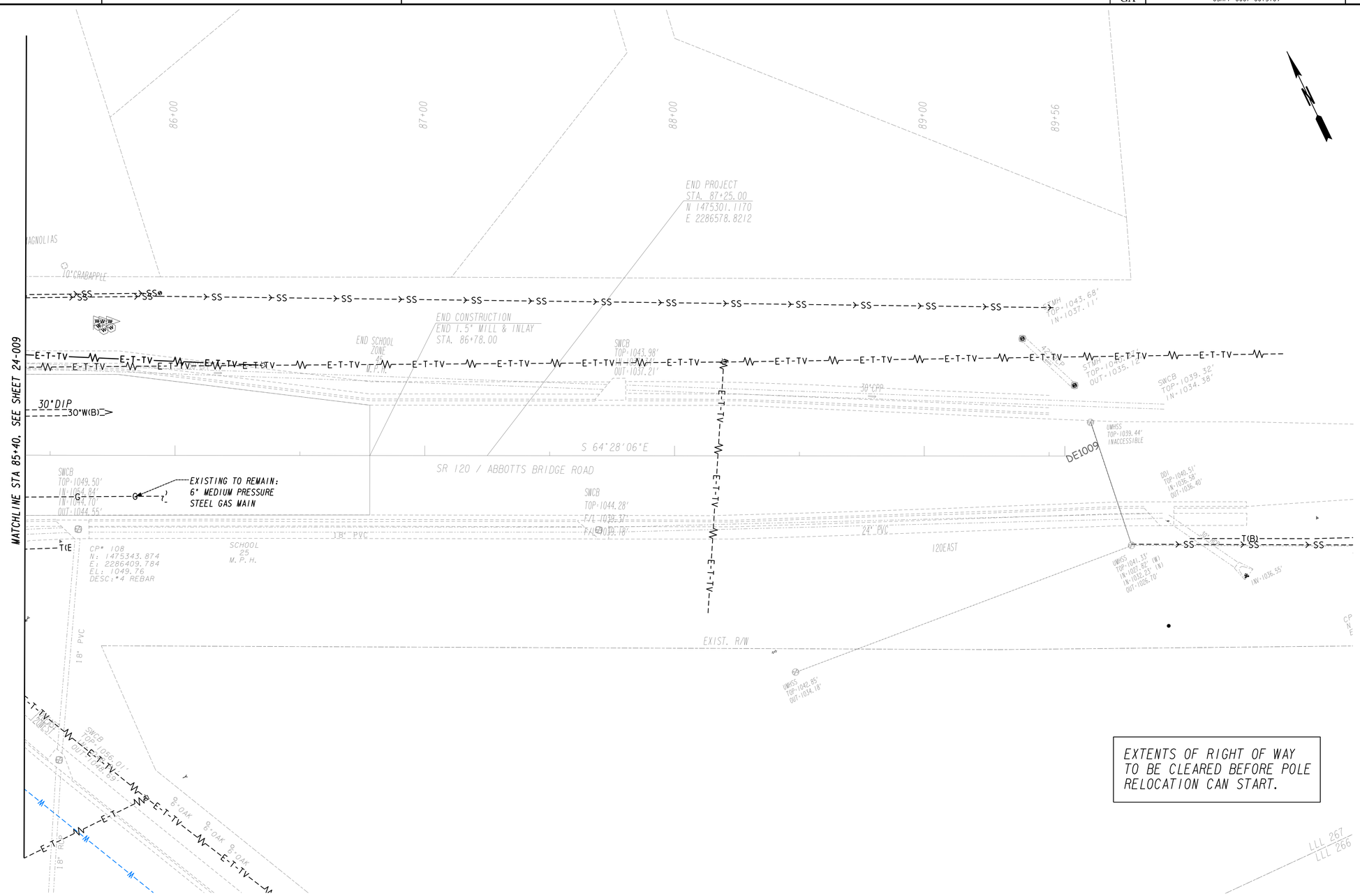
CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 44 -009

3/1/2007 GPLN



EXTENTS OF RIGHT OF WAY TO BE CLEARED BEFORE POLE RELOCATION CAN START.

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SCALE IN FEET
0 20 40 80

REVISION DATES		

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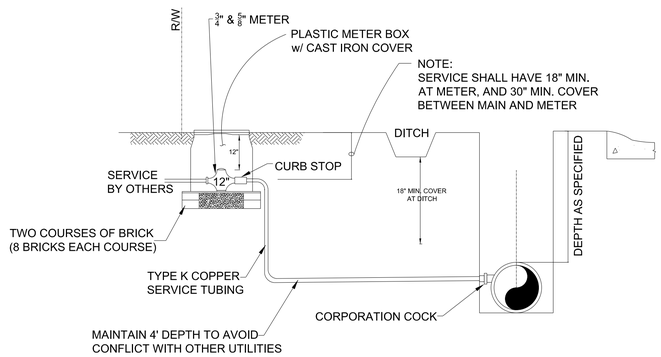
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
44- 010

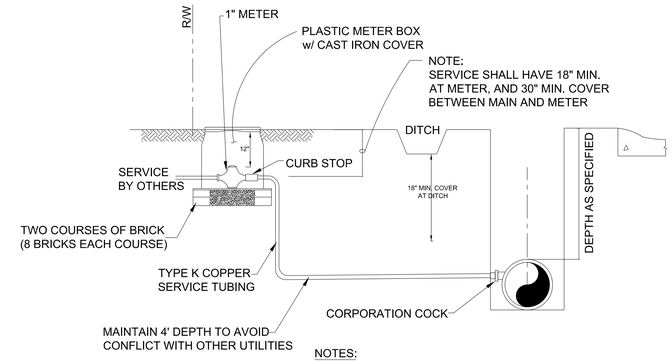
3/1/2007 GPLN



NOTES:

1. SERVICE LINE SHALL BE 3/4" DIAMETER FROM MAIN TO METER
2. USE ALL FLARE JOINTS
3. INSTALLATION SHALL ALLOW ADEQUATE ROOM TO REMOVE AND/OR REPAIR METER.
4. METER BOX SHALL BE APPROXIMATELY 12" x 18".
5. TYPE K COPPER SERVICE LINE MUST BE CONTINUOUS FROM METER TO MAIN
6. NEW WATER MAIN SUBJECT TO 250LB PRESSURE TEST FOR TWO HOURS.

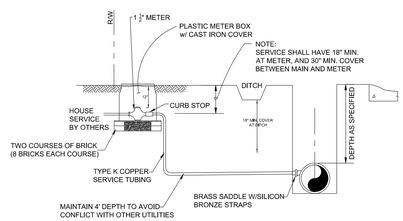
FULTON COUNTY STANDARD DETAIL 801
3/4" & 5/8" METER INSTALLATION



NOTES:

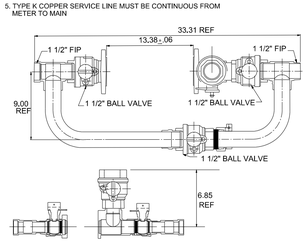
1.SERVICE LINE SHALL BE 1" FROM MAIN TO METER
2. USE ALL FLARE JOINTS
3. INSTALLATION SHALL ALLOW ADEQUATE ROOM TO REMOVE AND/OR REPAIR METER
4. METER BOX SHALL BE APPROXIMATELY 18" x 24"
5. TYPE K COPPER SERVICE LINE MUST BE CONTINUOUS FROM METER TO MAIN
6. NEW WATER MAIN SUBJECT TO 250LB PRESSURE TEST FOR TWO HOURS.

FULTON COUNTY STANDARD DETAIL 802
1" METER INSTALLATION

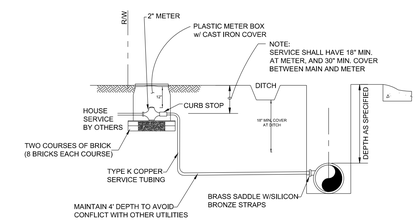


NOTES:

1.SERVICE LINE SHALL BE 1 1/2" FROM THE MAIN TO THE METER
2. USE ALL COMPRESSION GRIP JOINTS
3. INSTALLATION SHALL ALLOW ADEQUATE ROOM TO REMOVE AND/OR REPAIR METER
4. METER BOX SHALL BE APPROXIMATELY 24" x 36"
5. TYPE K COPPER SERVICE LINE MUST BE CONTINUOUS FROM METER TO MAIN

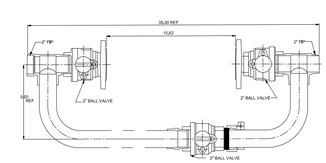


FULTON COUNTY STANDARD DETAIL 803
1 1/2" METER INSTALLATION



NOTES:

1.SERVICE LINE SHALL BE 2" DIAMETER FROM THE MAIN TO THE METER
2. USE ALL COMPRESSION GRIP JOINTS
3. INSTALLATION SHALL ALLOW ADEQUATE ROOM TO REMOVE AND/OR REPAIR METER
4. METER BOX SHALL BE APPROXIMATELY 24" x 36"
5. TYPE K COPPER SERVICE LINE MUST BE CONTINUOUS FROM METER TO MAIN



FULTON COUNTY STANDARD DETAIL 804
2" METER INSTALLATION

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REVISION DATES		

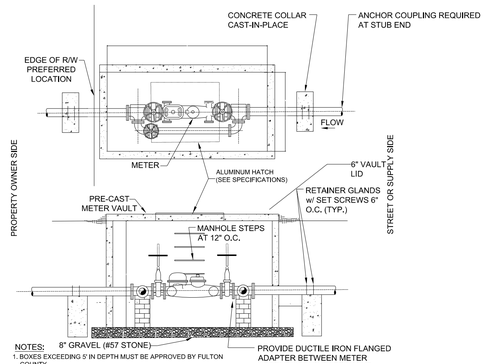
CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
44- 011

3/1/2007 GPLN

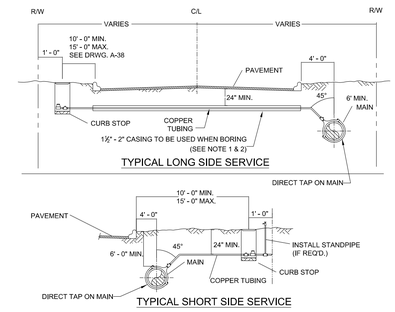


NOTES:

1. BOXES EXCEEDING 5' IN DEPTH MUST BE APPROVED BY FULTON COUNTY.
2. WHEN METER BOX CANNOT BE LOCATED ENTIRELY ON R/W, A PERMENANT EASEMENT SHALL BE OBTAINED TO PREVENT FENCES OR OTHER OBSTRUCTIONS FROM BEING ERECTED AROUND THE METER BOX.
3. COVER OPENING & STEPS TO BE PLACED NEAREST THE METER REGISTER.
4. THE METER MUST BE INSTALLED WITH AT LEAST 8 DIAMETERS OF STRAIGHT PIPE SAME SIZE AS METER ON THE INLET SIDE TO PERMIT ON-SITE MAINTENANCE AND CALIBRATION. A STRAINER MAY BE PROVIDED IN LIEU OF THE STRAIGHT PIPE IN ACCORDANCE WITH THE METER MANUFACTURER'S RECOMMENDATIONS. AN INLET AND OUTLET GATE VALVE WITH BYPASS LINE ARE REQUIRED (SEE ILLUSTRATION).
5. THESE BOXES ARE NOT TO BE INSTALLED IN TRAFFIC AREAS WITHOUT PRIOR PERMISSION FROM FULTON COUNTY.
6. ALL VALVES AND FITTINGS INSIDE THE VAULT SHALL BE FLANGED.
7. ALL FITTINGS OUTSIDE THE VAULT SHALL BE PUSH-ON JOINT WITH AMERICAN FAST-GRIP GASKETS OR APPROVED EQUAL.
8. ALL METERS SHALL COME EQUIPPED WITH A TOUCHREAD OR TOUCHLESS SENSOR COMPATIBLE WITH FULTON COUNTY'S METER READING EQUIPMENT.
9. THIS DETAIL ALSO AUTHORIZED FOR INSTALLATION OF 3" AND LARGER RE-USE METERS.
10. ALUMINUM HATCH SHALL BE DOUBLE LEAF, FLUSH MOUNT, 1/4" DIAMOND PLATE, ALUMINUM DOORS LOCKABLE WITH A 5/8" ROD. HATCH SHALL BE BILCO # PDCM-3 OR PRE-APPROVED EQUAL FOR 6" & 8" METERS. HATCH SHALL BE 3'6" X 3'6" SINGLE LEAF FLUSH MOUNT 1/4" DIAMOND PLATE, ALUMINUM DOOR LOCKABLE WITH 5/8" ROD. HATCH SHALL BE B.L.COMPCM - 5 OR PRE-APPROVED EQUAL FOR 3" & 4" METERS.

METER SIZE	VAULT L	VAULT W	VAULT D	HATCH SIZE
3"	9'	5'	6'	3'6" X 3'6"
4"	9'	5'	6'	3'6" X 3'6"
6"	12'	6'	6'	4' X 6'
8"	12'	6'	6'	4' X 6'

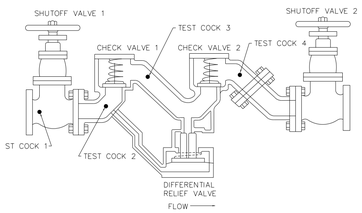
FULTON COUNTY STANDARD DETAIL 805
LARGE METERS AND VAULT



NOTES

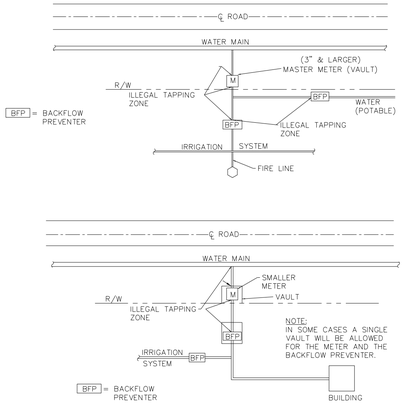
1. IN THE EVENT CASING IS NOT PRESENT ON LONG SIDE LOT, BORING SHALL BE PERMITTED. WHEN CASING DOES EXIST - 1" OR 2" PIPE SHALL BE INSERTED THROUGH CASING TO COMPLETE THE INSTALLATION FROM THE MAIN TO THE METER.
2. APPROVAL MUST BE OBTAINED BY FULTON COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION. PRIOR TO ROAD CUT. THE PUBLIC WORKS WATER SERVICES DIVISION DOES NOT HAVE THE AUTHORITY TO APPROVE ROAD CUTS, NO ROAD CUT SHALL BE PERMITTED UNTIL 3 ATTEMPTS HAVE BEEN MADE AT BORING OR LOCATING CASING.
3. 24" COVER (MIN.) FROM SURFACE TO TOP OF SERVICE PIPE APPLIES TO COUNTY MAINTAINED ROADS FOR STATE ROADS SAID MINIMUM CLEARANCE SHALL BE 48".
4. ALL CUTS IN PAVEMENT SHALL BE REPAIRED IN ACCORDANCE WITH EITHER GA. D.O.T. OR FULTON CO. STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DITCH COMPACTION, CUT BACK OF DITCH SIDES AND PAVING OF THE REQUIRED CONCRETE SUB-BASE AND PLATING THE DITCH TO ALLOW TRAFFIC FLOW WHILE CONCRETE IS SETTING UP. STEEL TRAFFIC PLATES WILL COVER POURED CONCRETE FOR A MINIMUM OF 24 HOURS.
5. METERS ARE TO BE SET DIRECTLY OPPOSITE TAP ON MAIN. THE METER SHALL NOT BE OFFSET LATERALLY FROM TAP ON WATER MAIN.

FULTON COUNTY STANDARD DETAIL 806
¾" – 1" METER SETTING
SHORT AND LONG SIDES



NOTE:
THE AIR-GAP OR MECHANICAL BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED SUBJECT TO THE APPROVAL OF FULTON COUNTY PUBLIC WORKS. ANY DEVIATION FROM THE METHODS DESCRIBED ABOVE MUST RECEIVE APPROVAL PRIOR TO INSTALLATION. ALL MECHANICAL BACKFLOW PREVENTION ASSEMBLIES APPROVED BY FULTON COUNTY PUBLIC WORKS FOR INSTALLATION AT THE SERVICE CONNECTION MUST BE APPROVED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, UNIVERSITY OF SOUTHERN CALIFORNIA. THESE ASSEMBLIES ARE ONLY APPROVED FOR THE HORIZONTAL ORIENTATIONS. CHOICE OF THE TYPE OF BACKFLOW PREVENTION ASSEMBLY, I.E. REDUCED PRESSURE PRINCIPLE OR DOUBLE CHECK VALVE ASSEMBLY, WILL BE BASED ON THE DEGREE OF HAZARD AS EVALUATED BY FULTON COUNTY PUBLIC WORKS.

FOR FURTHER INFORMATION REFER TO THE FULTON COUNTY MANUAL ON CROSS CONNECTIONS.



FULTON COUNTY STANDARD DETAIL 807
REDUCED PRESSURE PRINCIPLE
BACKFLOW-PREVENTION ASSEMBLY (1)

REDUCED – PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY (RPBA)

DESCRIPTION

THE APPROVED REDUCED-PRESSURE PRINCIPLE BACKFLOW-PREVENTION ASSEMBLY CONSISTS OF TWO INDEPENDENTLY ACTING, APPROVED CHECK VALVES TOGETHER WITH A HYDRAULICALLY OPERATING, MECHANICALLY INDEPENDENT PRESSURE DIFFERENTIAL RELIEF VALVE LOCATED BETWEEN THE CHECK VALVES AND BELOW THE FIRST CHECK VALVE. THESE UNITS ARE LOCATED BETWEEN TWO TIGHTLY CLOSING RESILIENT-SEATED SHUTOFF VALVES, AS AN ASSEMBLY, AND ARE EQUIPPED WITH PROPERLY LOCATED RESILIENT-SEATED TEST COCKS AS SHOWN.

APPLICATION

THE RPBA IS EFFECTIVE AGAINST BACKFLOW CAUSED BY BACKPRESSURE AND BACKSIPHONAGE.
THE RPBA IS NORMALLY USED IN LOCATIONS WHERE AN APPROVED AIR GAP IS IMPRACTICAL.

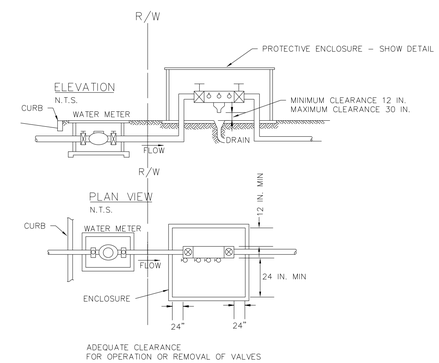
INSTALLATION

THE RPBA SHALL BE INSTALLED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING. THE INSTALLATION SHOULD NOT REQUIRE PLATFORMS, LADDERS, OR LIFTS FOR ACCESS.
ADEQUATE CLEARANCE FROM THE FLOOR, CEILING, AND WALLS MUST BE PROVIDED TO FACILITATE THE REMOVAL OF THE RELIEF VALVE AND/OR CHECK VALVES.

AN RPBA MUST BE PROTECTED FROM FREEZING TEMPERATURES AND IF INSTALLED WHERE TEMPERATURES WILL REACH 110 DEGREES FAHRENHEIT (43 DEGREES CELSIUS) OR ABOVE, THE HOT-WATER TYPE OF ASSEMBLY MUST BE USED. CONSULT MANUFACTURER'S SPECIFICATIONS FOR RECOMMENDATIONS.
AN RPBA SHALL NOT BE INSTALLED IN A PIT BELOW GROUND LEVEL. SEMIBURIED PITS ARE ACCEPTABLE IF THE RPBA IS INSTALLED ABOVE THE GROUND OR THE MAXIMUM FLOOD LEVEL WITH THE APPROVED AIR GAP BETWEEN THE RELIEF VALVE PORT AND THE DAYLIGHT DRAIN.
THE DAYLIGHT DRAIN FROM ABOVE GROUND OR SEMIBURIED VAULTS MUST PROVIDE: ADEQUATE DRAINAGE FOR THE DISCHARGE FROM THE REDUCED-PRESSURE PRINCIPLE ASSEMBLY RELIEF VALVE PORT.
ACCESS FOR MAINTENANCE AND PERIODIC TESTING MUST ALSO BE PREPARED.

BEFORE INSTALLING AN RPBA, ENSURE THAT THE RELIEF VALVES ARE IN GOOD WORKING CONDITION.
IF THE RPBA IS LOCATED INSIDE A BUILDING, A DRAIN MUST BE PROVIDED TO RECEIVE SPILLAGE FROM THE RELIEF VALVE PORT. THE RELIEF VALVE PORT MUST ALWAYS HAVE AN APPROVED AIR GAP BETWEEN IT AND THE DRAIN OR MAXIMUM FLOOD LEVEL, WHICHEVER IS HIGHEST.
ALL REDUCED-PRESSURE PRINCIPLE ASSEMBLIES SHALL BE INSTALLED IN THE

THE RPBA SHALL NOT BE INSTALLED IN AN AREA WHERE CORROSIVE FUMES OR GASES COULD RENDER THE ASSEMBLY INOPERABLE.



FULTON COUNTY STANDARD DETAIL 808
REDUCED PRESSURE PRINCIPLE
BACKFLOW-PREVENTION ASSEMBLY (2)

Johns Creek

Stantec

REVISION DATES		

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PUBLIC WORKS

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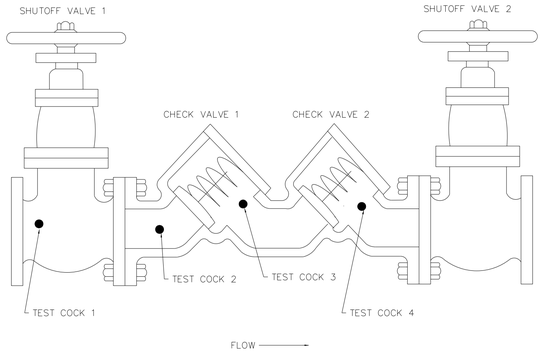
DRAWING No.
44- 012



NOTE: THE AIR-GAP OR MECHANICAL BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED SUBJECT TO THE APPROVAL OF FULTON COUNTY PUBLIC WORKS. ANY DEVIATION FROM THE METHODS DESCRIBED ABOVE MUST RECEIVE APPROVAL PRIOR TO INSTALLATION. ALL MECHANICAL BACKFLOW PREVENTION ASSEMBLIES APPROVED BY FULTON COUNTY PUBLIC WORKS FOR INSTALLATION AT THE SERVICE CONNECTION MUST BE APPROVED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, UNIVERSITY OF SOUTHERN CALIFORNIA. THESE ASSEMBLIES ARE ONLY APPROVED FOR THE HORIZONTAL ORIENTATIONS. CHOICE OF THE TYPE OF BACKFLOW PREVENTION ASSEMBLY, I.E. REDUCED PRESSURE PRINCIPLE OR DOUBLE CHECK VALVE ASSEMBLY, WILL BE BASED ON THE DEGREE OF HAZARD AS EVALUATED BY FULTON COUNTY PUBLIC WORKS.

FOR FURTHER INFORMATION REFER TO THE FULTON COUNTY MANUAL ON CROSS CONNECTIONS.

FULTON COUNTY STANDARD DETAIL 809
DOUBLE CHECK VALVE ASSEMBLY

DOUBLE CHECK VALVE ASSEMBLE (DCVA)

DESCRIPTION

THIS ASSEMBLY CONSISTS OF TWO INTERNALLY LOADED CHECK VALVES, EITHER SPRING-LOADED OR INTERNALLY WEIGHTED, INSTALLED AS A UNIT BETWEEN TWO TIGHTLY CLOSING RESILIENT-SEATED SHUTOFF VALVES AS AN ASSEMBLY, AND FITTINGS WITH PROPERLY LOCATED RESILIENT-SEATED TEST COCKS AS SHOWN.

APPLICATION

THE DCVA IS EFFECTIVE AGAINST BACKFLOW CAUSED BY BACKPRESSURE AND BACKSIPHONAGE AND IS USED TO PROTECT THE WATER SYSTEM FROM POLLUTANTS THAT WOULD NOT CONSTITUTE AN ACTUAL HEALTH HAZARD, BUT THAT MIGHT BE OBJECTIONABLE TO THE WATER SUPPLY SYSTEM.

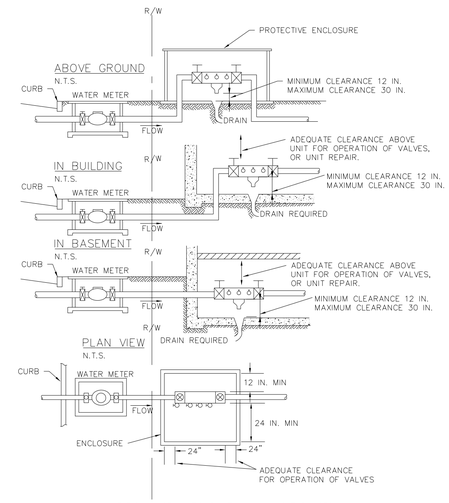
INSTALLATION

THE DCVA SHOULD BE INSTALLED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING AND SHOULD HAVE FREE ACCESS WITHOUT THE USE OF PLATFORMS, LADDERS, OR LIFTS.

A DCVA SHOULD NOT BE INSTALLED BELOW GROUND LEVEL UNLESS PROVIDED WITH ADEQUATE DRAINAGE TO MAINTAIN A DRY LOCATION. WHERE AN ASSEMBLY MUST BE INSTALLED IN A LOCATION THAT IS SUSCEPTIBLE TO FLOODING, SUCH AS A BASEMENT, THE TEST COCKS SHALL BE PLUGGED.

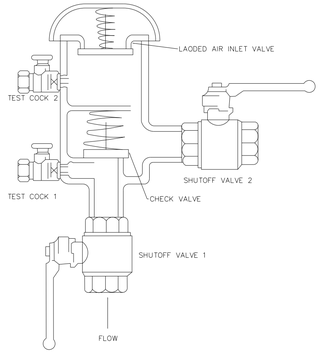
ALL DCVAS SHALL BE INSTALLED IN A HORIZONTAL POSITION UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER AND/OR FULTON COUNTY PUBLIC WORKS.

A DCVA MUST BE PROTECTED FROM FREEZING TEMPERATURES. FOR TEMPERATURES OF 100 DEGREES FAHRENHEIT (43 DEGREES CELSIUS) OR ABOVE, CONSULT MANUFACTURER'S LITERATURE FOR RECOMMENDATIONS.



TYPICAL INSTALLATIONS WITH MINIMUM CLEARANCES
DOUBLE CHECK VALVE ASSEMBLIES

FULTON COUNTY STANDARD DETAIL 810
DOUBLE CHECK VALVE ASSEMBLY



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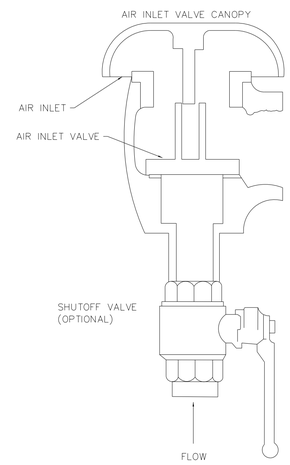
FOR FURTHER INFORMATION REFER TO THE FULTON COUNTY BACKFLOW PREVENTION PROGRAM.

FULTON COUNTY STANDARD DETAIL 811
PRESSURE VACUUM BREAKER ASSEMBLY



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FOR FURTHER INFORMATION REFER TO THE FULTON COUNTY BACKFLOW PREVENTION PROGRAM.

FULTON COUNTY STANDARD DETAIL 812
ATMOSPHERIC VACUUM BREAKER ASSEMBLY

Johns Creek

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REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

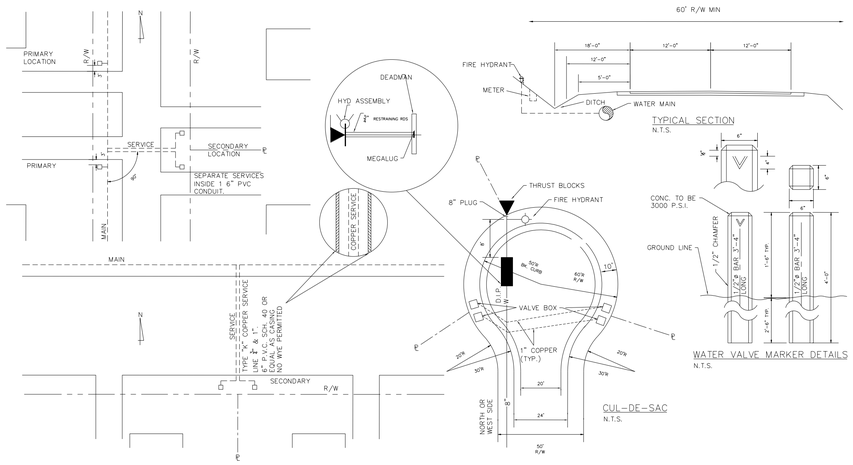
WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

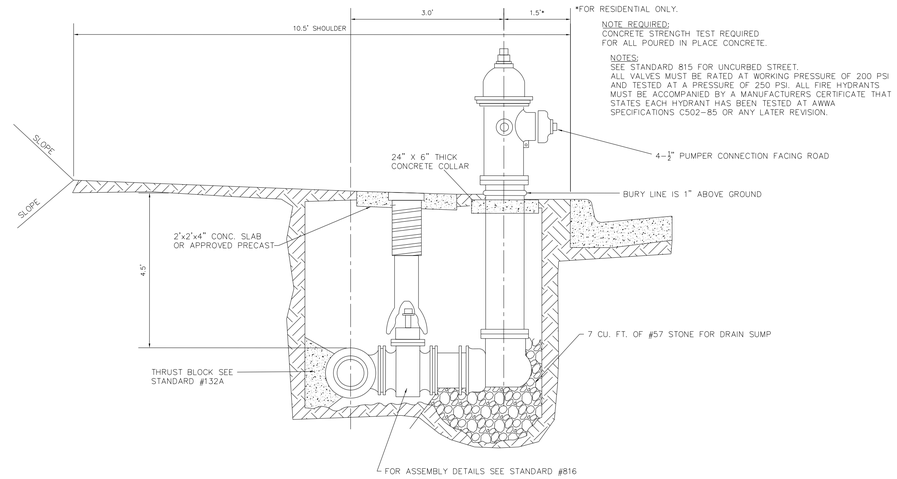
DRAWING No.
44- 013

3/1/2007 GPLN

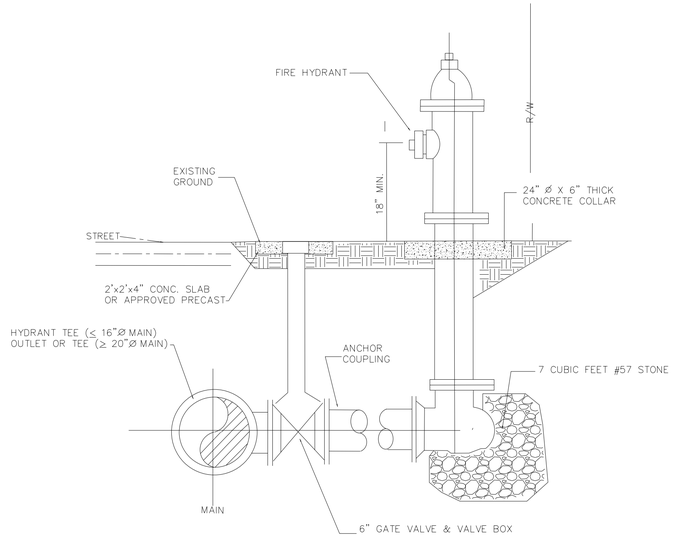
NOTES:
1. SEE STD. # 133 FOR VALVE LOC. AT STREET INTERSECTION
2. WATER VALVE MARKERS WILL BE PLACED AT ALL LOCATIONS WHERE WATER VALVES ARE NOT IN THE STREET.
3. WATER VALVES THAT ARE IN THE STREET, WILL BE CLEARLY MARKED ON THE CURB.



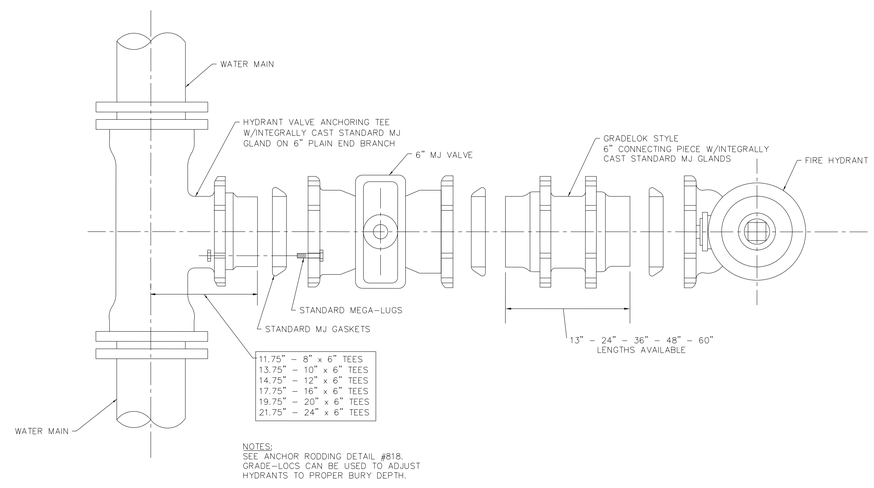
FULTON COUNTY STANDARD DETAIL 813
WATER METER INSTALLATION, ¾" & 1" COPPER SERVICE
WATER VALVE MARKERS



FULTON COUNTY STANDARD DETAIL 814
HYDRANT LOCATION DETAIL FOR
CURB & GUTTER STREETS



FULTON COUNTY STANDARD DETAIL 815
FIRE HYDRANT STREET UNCURBED



FULTON COUNTY STANDARD DETAIL 816
FIRE HYDRANT INSTALLATION DETAILS

Johns Creek

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REVISION DATES		

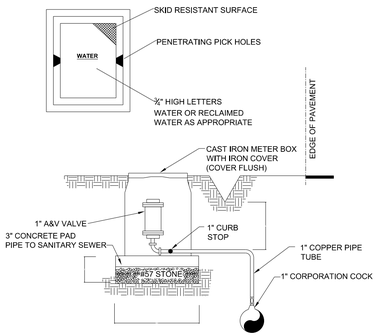
CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 44- 014

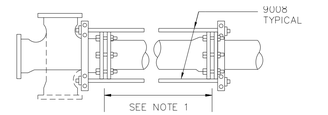
3/1/2007 GPLN



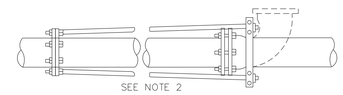
NOTES:

1.VALVE MARKER REQUIRED.
2. A&V VALVE AND COPPER SHALL BE SIZED IN ACCORDANCE WITH VALVE MANUFACTURER'S RECOMMENDATIONS.
3.METER BOX SHALL BE CDR 10 X 15HC OR APPROVED EQUAL
4.A & V VALVE SHALL BE VENT-O-MAT SERIES RBX OR EQUAL

FULTON COUNTY STANDARD DETAIL 817
A & V RELEASE VALVE ASSEMBLY
1" OR 2"



TEE ANCHOR
N.T.S.



PIPE OR BEND ANCHOR TO FLANGE SPIGOT
N.T.S.

NOTES:

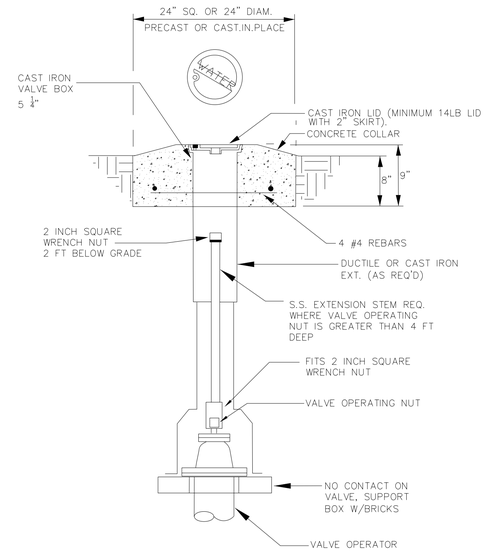
1. IN THE ASSEMBLIES OF RODS AND CLAMPS SHOWN, RODS RUN FROM A LUG ON THE FITTING (OR A CLAMP BEHIND THE HUB OF A BELL) TO A CLAMP AGAINST THE FACE OF A BELL. NOTE THAT THIS ARRANGEMENT ANCHORS ONLY ONE JOINT. THE STABILITY OF THE JOINT WHERE THE CLAMP IS AGAINST THE FACE OF THE BELL DEPENDS ON HAVING SOIL ABOVE A RELATIVELY LONG PIECE OF PIPE ON BOTH SIDES OF THE JOINT. CONSEQUENTLY, IF THE DISTANCE BETWEEN THE FIRST AND SECOND JOINT IS LESS THAN 12 FEET, THE SECOND JOINT SHOWN SHALL BE ANCHORED BY A CLAMP BEHIND THE HUB OF THE BELL AND RODS TO A CLAMP AT THE FACE OF THE NEXT BELL.

2. IN THE ASSEMBLIES SHOWN FOR RODS TO FLANGED FITTINGS, NOTE THAT THE FLANGED FITTING IS NOT TO BE BURIED IN SOIL.

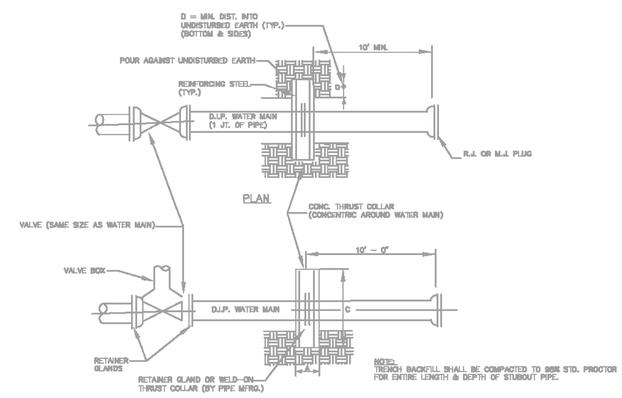
3. AFTER INSTALLATION TIE RODS AND CLAMP ASSEMBLY SHALL BE THOROUGHLY COVERED WITH ROYSTON LABORATORIES INC. ROSKOTE MASTIC NO. A-938 OR KOPPERS CO INC. BITUMASTIC SUPERSERVICE BLACK OR APPROVED EQUIVALENT.

4. RODS TO BE HIGH TENSILE, HOT ROLLED STEEL WITH TENSILE STRENGTH OF 150,000 P.S.I. AND A MINIMUM YIELD STRENGTH OF 130,000 P.S.I.

FULTON COUNTY STANDARD DETAIL 818
TYPICAL ANCHORS



FULTON COUNTY STANDARD DETAIL 819
UNDERGROUND VALVE BOX



MAIN DIA	CONCRETE COLLAR DIM.				REINFORCING STEEL
	A	B	C	D	
24"	1'–10"	9'–3"	9'–3"	2'–9"	#8 @ 12" O.C. E.W.E.F.
16"	1'–3"	6'–6"	6'–6"	1'–10"	#8 @ 12" O.C. E.W.E.F.
10" OR 12"	1'–2"	5'–3"	5'–3"	1'–4"	#7 @ 12" O.C. E.W.E.F.
6" OR 8"	1'–0"	4'–0"	4'–0"	1'–0"	#6 @ 12" O.C. E.W.E.F.

TEST PRESSURE: 250 P.S.I.
SOIL BEARING PRESSURE: 2500 P.S.F.

NOTE:
TERMINATION DETAIL FOR LARGER DIAMETER PIPE SHALL BE DETERMINED FOR EACH PROJECT.

FULTON COUNTY STANDARD DETAIL 820
WATER MAIN TERMINATION

Johns Creek

Stantec

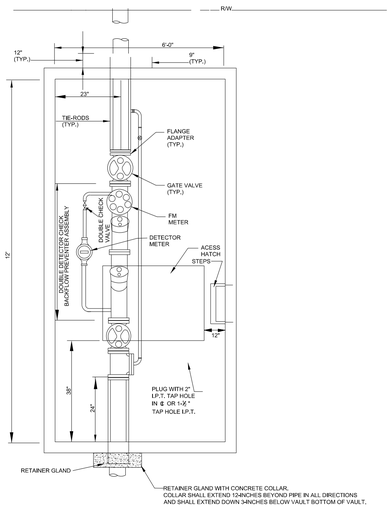
REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
44- 015



1. TYPE I VAULT SHALL BE USED FOR 3,4,6 OR 8-INCH FM METER.
2. SEE SPECIFICATION SECTION 02665 FOR MATERIAL SPECIFICATIONS. ALL MATERIAL TO BE FURNISHED BY CONTRACTOR.
3. ALL FITTINGS SHALL BE DUCTILE IRON WITH FLANGED JOINTS. GATE VALVES SHALL BE WITH HANDWHEELS.
4. VAULT SHALL BE PRECAST CONCRETE. MIN. INSIDE HEIGHT SHALL BE 6 FEET. LOAD BEARING VAULT SHALL BE DESIGNED BY PROPERTY OWNER'S ENGINEER, AND SUBMITTED TO COUNTY FOR APPROVAL.
5. ACCESS HATCH/FLOOR DOOR SHALL BE MIN. 36"X36" (BILCO MODEL PCM-5) FOR 3 & 4-INCH METERS OR 54"X54" (BILCO MODEL PDCM-3) FOR 6 & 8-INCH METERS.
6. VAULT FLOOR SHALL BE # 57 CRUSHED STONE, MIN. 6-INCHES THICK.
7. PROVIDE RETAINER GLAND ON PIPE BEYOND VAULT WALLS. PROVIDE TWO TIE RODS FROM FIRST INTERIOR FLANGE TO RETAINER GLANDS, WITH DOUBLE NUTS AND WASHERS. ENCASE RETAINER GLANDS IN CONCRETE. ALSO, PROVIDE TIE RODS FROM RETAINER GLAND TO TAPPING VALVE OR CASING UNDER ROAD, WHICH-EVER IS CLOSER. RODS SHALL BE PROVIDED WITH BITUMASTIC COATING.
8. VAULT WALL OPENINGS SHALL BE SEALED WITH NON-SHRINK GROUT. ENSURE 1-INCH CLEARANCE BETWEEN TOP OF PIPE AND PRECAST WALL.
9. MANHOLE STEPS SHALL BE DOWELLED INTO VAULT WALL AND CENTERED ON ACCESS HATCH.

FM METER		
METER SIZE	6" & 8"	3" & 4"
VAULT INTERIOR DIMENSION	12' X 6'	9' X 5'

FULTON COUNTY STANDARD DETAIL 825
FM ASSEMBLY

Johns Creek

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REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
(CSHPP-0007-00(310)) 06/17/2015

DRAWING No.
44- 017

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	179	241

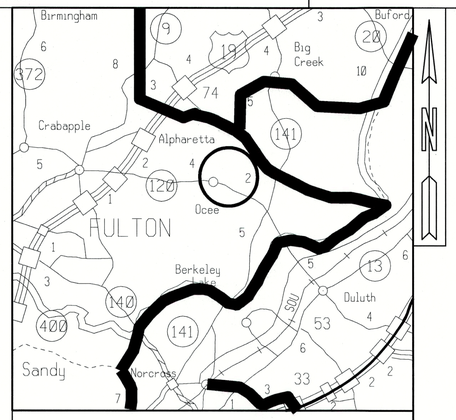
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

EROSION, SEDIMENT, & POLLUTION CONTROL PLAN
SR 120 / ABBOTTS BRIDGE ROAD OPERATIONAL IMPROVEMENTS FROM JONES BRIDGE ROAD TO PARSONS ROAD(WEST) CSHPP-0007-00(310), CITY OF JOHNS CREEK, FULTON COUNTY

FEDERAL AID PROJECT

FEDERAL ROUTE * N/A
STATE ROUTE * 120
P.I. NO. 0007310

MID-POINT COORDINATES
LATITUDE: 34.06 DEG N
LONGITUDE: -84.21 DEG W

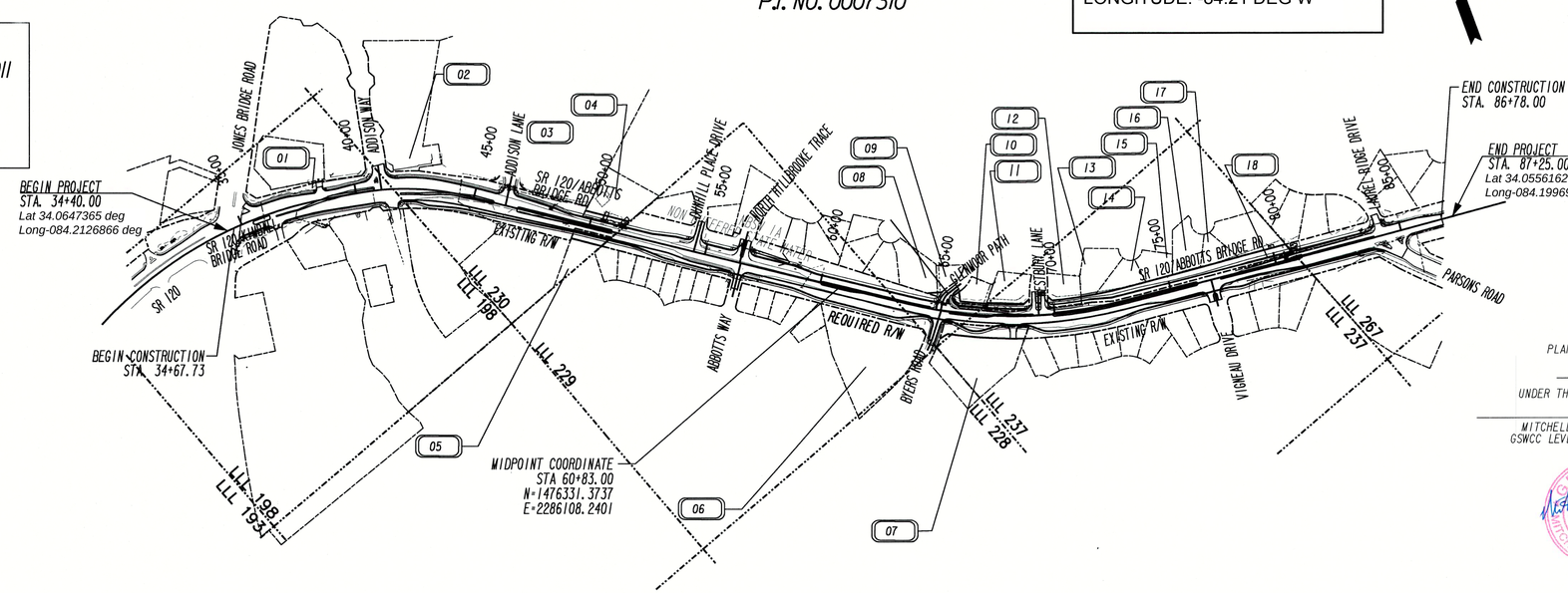


LOCATION SKETCH

This project has been prepared using the Horizontal Georgia Coordinate System of 1984(NAD1983)/94 WEST Zone, and the North American Vertical Datum (NAVD) of 1988.

APPROVED CONCEPT REPORT: 11-18-2011

MS4 COMPLIANCE: EXEMPT



"I certify that this Erosion, Sedimentation and Pollution Control Plan has been prepared in accordance with Part IV, of the General NPDES Permit No. GAR100002."

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land disturbing activity was permitted, provides for sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100002."

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the General NPDES Permit No. GAR100002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water."

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that the certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I certify under penalty of law that this plan was prepared after a site visit to the location described herein by myself or my authorized agent, under my direct supervision."

Johns Creek

SCALE IN FEET
0 300 600 1200

Stantec

PLANS PREPARED BY
STANTEC
UNDER THE SUPERVISION OF
MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

GEORGIA REGISTERED PROFESSIONAL ENGINEER MITCHELL I. GREENWAY 6/17/2015

Stantec Consulting Services
6055 Lakeside Commons Drive
Suite 100
Macon, Georgia U.S.A. 31210-5790
Tel. (478) 474-6100
Fax. (478) 474-8933
www.stantec.com

PRIMARY PERMITTEE:
City of Johns Creek, GA
12000 Findley Road
Johns Creek, GA 30097
678-512-3200

24 HOUR CONTACT:

Name

Phone Number

Contractor shall complete the information in this box.

LENGTH OF PROJECT	COUNTY No. 121 Project No. CSHPP-0007-00(310)
	MILES
NET LENGTH OF ROADWAY	0.991
NET LENGTH OF BRIDGES	0.000
NET LENGTH OF PROJECT	1.001
NET LENGTH OF EXCEPTIONS	0.000
GROSS LENGTH OF PROJECT	1.001

PLANS COMPLETED 06-17-2015

REVISIONS

DATE	ENTITY REQUESTING REVISION(S)	DRAWING NUMBER(S)	SIGNATURE	GSWCC LEVEL II CERT.#
- -				
- -				
- -				
- -				
- -				
- -				
- -				

DRAWING No.
50-001

DESCRIPTION OF PROJECT

This project will involve adding a three lane section along SR120 (Abbotts Bridge Road) from Jones Bridge Road to Parson Road (west) along with bike lanes, sidewalk improvements along the southern shoulder and an 8'-10' enhanced sidewalk along the northern shoulder.

REVISED NOVEMBER 9, 2012

ESPCP GENERAL NOTES:

The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land-disturbing activities.

Erosion and sedimentation control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective control, additional erosion and sedimentation control measures shall be implemented to control or treat the sediment source.

PLAN ALTERATIONS

The Erosion, Sedimentation, and Pollution Control Plan (ESPCP) is provided by the Department. It addresses the staged construction of the project based on common construction methods and techniques. If the Contractor elects to alter the staged construction from that shown in the plans or utilize construction techniques that render this plan ineffective, the Contractor shall revise the plans in accordance to Special Provision 161 of the contract.

The Contractor, the Certified Design Professional, and the WECS shall carefully evaluate this plan prior to commencing land-disturbing activities. A major modification or deletion of structural BMP's with a hydraulic component requires a formal revision of the ESPCP and the signature of a GSWCC level-II-certified design professional. Additional BMP's may be added per Special Provision 161 - Control of Soil Erosion and Sedimentation.

TEMPORARY MULCHING

EPD General Permit GAR 100002 states that any disturbed area where construction activities have temporarily or permanently ceased shall be stabilized within 14 days of such cessation as soon as practicable with a suitable material listed in Standard Specification (or Special Provision) Sections 163, 700, or 711. However in special cases, the Project Engineer may require the contractor to perform stabilization more often than 14 days.

VEGETATION AND PLANTING SCHEDULE

All temporary and permanent vegetative practices including plant species, planting dates, seeding, fertilizing, liming, and mulching for this project can be found in Section 700 of the current edition of the Department's Standard Specifications (or special provisions) and other applicable contract documents, or landscaping plans.

SEQUENCE OF MAJOR ACTIVITIES

The Contractor is responsible for developing the construction schedule for the project. The construction schedule for this project shall be submitted after the project is awarded along with the NOI. A copy of the construction schedule shall be maintained at the project site.

The project budget includes sufficient funds for the payment of construction exits. The Contractor is responsible for establishing at least one (1) construction exit per the specifications of the construction exit detail included in this ESPCP. To facilitate project logistics, the Contractor is also responsible for selecting the location(s) of the construction exit(s).

BMPs shall be placed according to the staged location details. Silt fence shall be placed before clearing and grubbing during Phase I Initial Stabilization. Inlet sediment traps, outlet protection, slope mats, mulch, and temporary grassing shall be placed during road construction (Phase 2 Intermediate Stabilization). Phase 3 Final Stabilization BMPs shall be the last to be placed.

PETROLEUM STORAGE, SPILLS AND LEAKS

These plans expressly delegate the responsibility of proper on-site hazardous material management to the Contractor.

The Contractor shall at a minimum provide an action plan and keep the necessary materials on site for the capture, clean up, and disposal of any petroleum product, or other hazardous material, leaks or spills associated with the servicing, refueling or operation of any equipment utilized at the site. A copy of the action plan shall be submitted to the Project Engineer and maintained on the project site. All personnel operating or servicing equipment shall be familiar with the action plan. The Contractor shall not park, refuel, or maintain equipment within stream buffers.

If the Contractor elects to store petroleum products on site, the Contractor shall prepare an ESPCP addendum that addresses the additional BMPs needed for onsite storage and spill prevention for petroleum products. This plan shall be prepared by a Certified Design Professional as required by GAR100002 for inclusion with these plans. The Contractor's attention is specifically directed to Standard Specification 107-Legal Regulations and Responsibility to the public for additional requirements.

WASTE DISPOSAL

Where attainable, locate waste collection areas, dumpsters, trash cans and portable toilets at least 50 feet away from streets, gutters, watercourses and storm drains. Secondary containment shall be provided around liquid waste collection areas to minimize the likelihood of contaminated discharges. The Contractor shall comply with applicable state and local waste storage and disposal regulations and obtain all necessary permits. Solid materials, including building materials, shall not be discharged to Waters of the State, unless authorized by a Section 404 Permit.

SOIL SERIES INFORMATION

The following is a summary of the soils that are expected to be found on the project site:

Map Unit Symbol	Map Unit Name	Map Unit Symbol	Map Unit Name
AaB	Altavista sandy loam, 2 to 6 percent slopes	MdC2	Madison-Bethlehem complex, 6 to 10 percent slopes, moderately eroded
BaA	Buncombe loamy sand, 0 to 3 percent slopes, occasionally flooded	ReD	Rion sandy loam, 10 to 15 percent slopes
CaA	Cartecay-Toccoa complex, 0 to 2 percent slopes, occasionally flooded	Ub	Urban land
CeB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	UfC2	Urban land- Cecil complex, 2 to 10 percent slopes, moderately eroded
CeC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	UgC	Urban land- Grover-Mountain Park complex, 2 to 10 percent slopes, stony
GdC	Grover-Mountain Park complex, 2 to 10 percent slopes, stony	UgE	Urban land- Grover-Mountain Park complex, 10 to 25 percent slopes, stony
GdE	Grover-Mountain Park complex, 10 to 20 percent slopes, stony	UrE	Urban land- Rion complex, 10 to 25 percent slopes
GaF	Grover-Mountain Park complex, 20 to 60 percent slopes, stony	WbA	Wehadkee- Cartecay complex, 0 to 2 percent slopes, occasionally flooded

Due to the size and scope of this project and the nature of soil series maps, it is not reasonably practical to delineate the precise locations of the above listed soils on the construction plans. The NRCS soil survey and soil series maps for the project area are also available online at http://websoilsurvey.nrcs.usda.gov/.

PERMANENT BMP'S

Measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed include permanent grassing, permanent rip rap, and stone check dams.

INSPECTION OF INITIAL BMP'S

The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation.

POST-CONSTRUCTION BMP'S

All permanent, post-construction BMP's are shown in the construction plans and in the ESPCP plan. The post-construction BMP's for this project consists of vegetation, rip-rap at pipe outlets for velocity dissipation and outlet stabilization and vegetated swales/ditches where practical, channel/ditch stabilization with riprap and concrete ditch lining where necessary. The post-construction BMP's will provide permanent stabilization of the site and prevent abnormal transportation of sediment and pollutants into receiving waters.

SILT FENCE INSTALLATIONS WITH J-HOOKS AND SPURS

Silt fence should never be run continuously. The silt fence should turn back into the fill or slope to create small pockets that trap silt and force stormwater to flow through the silt fence. This technique is called using J-Hooks (or spurs). The J-Hooks shall be utilized on all silt fences that are located around the perimeter of the project and along the toe of embankments or slopes. The J-Hooks shall be spaced in accordance with GDOT Construction Detail D-24C. The maximum J-hook spacing is reached when the top of the J-Hook is at the same elevation as the bottom of the immediately upgradient J-Hook. J-Hooks shall be paid for as silt fence items per linear foot. All costs and other incidental items are included in cost of installing and maintaining the silt fence.

All silt fences must be placed as access is obtained during clearing. No grading shall be done until silt fence installation is complete. It is the Contractor's responsibility to maintain all silt fences and to repair or replace any silt fence that is not satisfactory. Erosion Control Gates shall be placed immediately after drainage structures are in place. All Erosion Control Devices shall be placed according to the plans and as directed by the Engineer. See the GaDOT Standard Specifications regarding Erosion Control and the manual for Erosion and Sediment Control by G.S.W.C.C. The Contractor shall be responsible for keeping wetland areas free from siltation. The Contractor shall obtain and abide by all Corps of Engineers rules and regulations concerning construction adjacent to waterways and maintain water quality.

SITE STABILIZATION AND BMP MAINTENANCE MEASURES

See the Department's Standard Specifications (or Special Provisions) 161, 163, 165, 700, 711, and other contract documents for stabilization and maintenance measures.

DEWATERING AND PUMPING ACTIVITIES

Any pumped discharge from an excavation or disturbed area shall be routed through an appropriately sized sediment basin, silt filter bag, or shall be treated equivalently with suitable BMP's. The contractor shall ensure the post BMP treated discharge is sheet flowing. Failure to create sheet flow will obligate the contractor to perform water quality sampling of pumped discharges. The contractor shall prepare sampling plans in accordance with the current GAR100002 NPDES permit utilizing by a Certified Design Professional. No separate payment will be made for water quality sampling of pump discharges.

STORM WATER DISCHARGES

Storm water discharges shall be subject to the requirements as required by the Georgia Erosion and Sedimentation Control Act, the NPDES Permit, the Clean Water Act, The Manual for Erosion and Sediment Control in Georgia, Department Standards, and contract documents.

NON-STORM WATER DISCHARGES

Non-storm water discharges defined in Part III.A.2 of the NPDES Permit will be identified after construction has commenced. These discharges shall be subject to the same requirements as storm water discharges required by the Georgia Erosion and Sedimentation Control Act, the NPDES Permit, the Clean Water Act, The Manual for Erosion and Sediment Control in Georgia, Department Standards, and contract documents.

USE OF ALTERNATIVE AND/OR ADDITIONAL BMPS

Fabric check dams will be used on this project as an alternative BMP. The use of the alternative BMP for stone check dams has been reviewed by the Georgia EPD and has been determined by the Georgia EPD to be allowable only for this ESPCP. This review was site specific and was based on the documentation submitted and certified by the Level-II Certified Design Professional and was required by the Georgia EPD and the Georgia SWCC.

INSPECTIONS

The primary permittee must retain the design professional who prepared the ESPCP, or an alternative design professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within seven (7) days of installation over the entire infrastructure project. Alternatively, for linear infrastructure projects, the permittee must retain either of these personnel to inspect the initial sediment storage requirements and perimeter control BMPs for the initial segment, as defined by Part IV.A.5. of the current GAR100002 Permit, within seven (7) days of installation and all sediment basins within the entire linear infrastructure project within seven (7) days of installation. The inspecting design professional shall report the results to the primary permittee within seven (7) days, and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report, unless on-site weather conditions are such that more time is required. Additionally, the Department's Construction Project engineer will be responsible for all subsequent seven-day inspections for all new BMP installations.

All other inspecitons shall be documented on the appropriate Department inspection forms. See Standard Specification (or Special Provision) 167 and other contract documents for inspection requirements. These inspections shall continue until the Notice of Termination (NOT) is submitted.

Failure to perform inspections as required by the contract documents and the NPDES permit shall result in the cessation of all construction activities with the exception of Traffic Control and Erosion Control. Continued failure to perform inspections shall result in non-refundable deductions as specified in the contract documents.

OTHER CONTROLS

The Contractor shall follow this ESPCP and ensure and demonstrate compliance with all applicable State and/or local regulations for waste disposal, sanitary sewer and septic systems, and petroleum storage.

The Contractor shall control dust from the site in accordance with Section 161 of the current edition of the Department's Standard Specifications.

SEDIMENT STORAGE

The site has a total disturbed area of 7.95 acres. The following table summarizes the required and available sediment storage for every outfall on this project. The Contractor shall provide and maintain the storage volumes for the BMPs specified in this table.

Location/ Drainage Basin	Total Drainage Area (acres)	Disturbed Area (acres)	Sediment Storage Volume Required (CY)	Total Storage Volume Provided (CY)	Sediment Basins		Check Dam (1.55 CY/each)		Inlet Sediment (1.48 CY/each)		Silt Fence (0.3 CY/ft)	
					Pond #	Total Volume (CY)	# of Devices	Total Volume (CY)	# of Devices	Total Volume (CY)	Length of Fence (ft)	Total Volume (CY)
46+92, 106' RT / Area A	2.78	0.22	186.26	7.40	0.00	0.00	0.00	0.00	5.00	7.40	0.00	0.00
59+73, 76' LT / Area B	6.68	2.50	447.56	313.30	0.00	0.00	10.00	15.50	20.00	29.60	894.00	268.20
65+14, 33' LT / Area C	0.46	0.29	30.82	2.96	0.00	0.00	0.00	0.00	2.00	2.96	0.00	0.00
66+44, 32' LT / Area D	0.55	0.17	36.85	2.96	0.00	0.00	0.00	0.00	2.00	2.96	0.00	0.00
75+89, 80' RT / Area E	0.71	0.33	47.57	13.81	0.00	0.00	7.00	10.85	2.00	2.96	0.00	0.00
84+27, 52' LT / Area F	3.74	1.68	250.58	29.60	0.00	0.00	0.00	0.00	20.00	29.60	0.00	0.00
85+61, 30' RT / Area G	1.07	0.26	71.69	71.90	0.00	0.00	0.00	0.00	5.00	7.40	215.00	64.50
Sheet Flow	2.50	2.50	167.50	1,141.50	0.00	0.00	0.00	0.00	0.00	0.00	3,805.00	1,141.50
	18.49	7.95	1,238.83	1,583.43		0.00		26.35		82.88		1,474.20

The total storage volume provided for Drainage Area A does not meet the required. The installation of a sediment basin in these areas would increase the disturbed area and was not feasible due to property constraints. In addition, the construction and maintenance of the sediment basin would significantly increase the total cost of the project.

The total storage volume provided for Drainage Area B does not meet the required. The installation of a sediment basin in these areas would increase the disturbed area and was not feasible due to property constraints. In addition, the construction and maintenance of the sediment basin would significantly increase the total cost of the project.

The total storage volume provided for Drainage Area C does not meet the required. The installation of a sediment basin in these areas would increase the disturbed area and was not feasible due to property constraints. In addition, the construction and maintenance of the sediment basin would significantly increase the total cost of the project.

The total storage volume provided for Drainage Area D does not meet the required. The installation of a sediment basin in these areas would increase the disturbed area and was not feasible due to property constraints. In addition, the construction and maintenance of the sediment basin would significantly increase the total cost of the project.

The total storage volume provided for Drainage Area E does not meet the required. The installation of a sediment basin in these areas would increase the disturbed area and was not feasible due to property constraints. In addition, the construction and maintenance of the sediment basin would significantly increase the total cost of the project.

The total storage volume provided for Drainage Area F does not meet the required. The installation of a sediment basin in these areas would increase the disturbed area and was not feasible due to property constraints. In addition, the construction and maintenance of the sediment basin would significantly increase the total cost of the project.

The total storage volume provided for Drainage Area G exceeds the minimum required. A sediment basin is not necessary and the installation of a sediment basin in these areas would increase the disturbed area and was not feasible due to property constraints. In addition, the construction and maintenance of the sediment basin would significantly increase the total cost of the project.

The total storage volume provided for sheet flow exceeds the minimum required. A sediment basin is not necessary and the installation of a sediment basin in these areas would increase the disturbed area and was not feasible due to property constraints. In addition, the construction and maintenance of the sediment basin would significantly increase the total cost of the project.

To minimize time of disturbance contractor shall provide temporary stablization by way of temporary grassing or mulching.

MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

ESPC GENERAL NOTES

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
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DRAWING No. 51-001

STREAM BUFFER ENCROACHMENT

Stream Buffers are not impacted by this project. The Contractor is not authorized to enter into stream buffers.

ACTIVITY SCHEDULE

Erosion Control measures shall be installed prior to or oncurrent with land disturbance activities and shall be maintained at all times. Additional Erosion and Sediment Control Devices shall be installed if deemed necessary by onsite inspection or as directed by the engineer.

ESPC ACTIVITY SCHEDULE

	Phase 1	Phase 2	Phase 3
Install Perimeter ESPC	X		
Clearing & Demolition	X		
Install Intermediate ESPC			
Excavation & Backfill		X	
Temp. Grassing & Mulching		X	
Project Construction		X	X
Permanent Grassing			X
Final Stablization & Clean out Storm Sewers			X
Remove Temporary Sediment Control Measures			X

READY MIX CHUTE WASH-DOWN

The washing of ready-mix concrete drums and dump truck bodies used in the delivery of Portland cement concrete is prohibited on this site.

In accordance with standard Specification 107 - Legal Regulations and Responsibility to the Public, only the discharge "chute" utilized in the delivery of Portland cement concrete may be rinsed free of fresh concrete remains. The Contractor shall excavate a pit outside of State water buffers, at least 25 feet from any storm drain and outside of the traveled way, including shoulders, for a wash-down pit. The pit shall be large enough to store all wash-down water without overtopping. Immediately after the wash-down operations are completed and after the wash-down water has soaked into the ground, the pit shall be filled in, and the ground above it shall be graded to match the elevation of the surrounding areas. Alternate wash-down plans must be approved by the Project Engineer.

Wash-down plans describe procedures that prevent wash-down water from entering streams and rivers. Never dispose of wash-down water down a storm drain. Establish a wash-down water pit location that includes the following:
(1) a location away from any storm drain, stream or river,
(2) access to the vehicle being used for wash-down
(3) sufficient volume for wash-down water, and
(4) permission to use the area for wash-down.

On sites where permission or access to excavate a wash-down pit is unavailable, the Contractor may have to wash-down into a sealable 55-gallon drum or other suitable container and then transport the container to a proper disposal site. For additional information, refer to the Georgia Small Business Environmental Assistance Program's "A Guide for Ready Mix Chute/Hopper Wash-down".

SAMPLING METHODS & PROCEDURES

See Special Provision 167 and other contract documents for Sampling Methods and Procedures.

STORM DRAIN PIPES

STR. #	LOCATION	SIZE	VELOCITY (ft/sec)	PROTECTION	TYPE	Do (ft)	Q (cfs)	Tw	La (ft)	3Do (ft)	W (ft)	d_{50} (ft)	D (ft)
E-10	56+68.59, 67' LT	42	6.36	RIPRAP	TP 1	3.5	28.93	0	15.0	10.5	20.0	0.8	2
H-2	75+88.97, 75' RT	24	6.27	RIPRAP	TP 3	2	3.43	0	8.0	6.0	10.0	0.5	1

RECORD OF DATES - CONSTRUCTION ACTIVITIES

(NOTE TO PERMITTEE(S): COMPLETE THE FOLLOWING TABLE TO INCLUDE THE DATES WHEN INITIAL CONSTRUCTION ACTIVITIES COMMENCE, MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE INITIATED. THE DESIGN PROFESSIONAL WHO PREPARED THIS PLAN SHALL BE NOTIFIED WHEN THIS TABLE IS AMENDED.)

DATE	DESCRIPTION OF CONSTRUCTION ACTIVITY

VEGETATIVE PLAN

SPECIES	BROADCAST RATES (PURE LIVE SEED RATES) PER ACRE	PER 1000 S.F.	PLANTING DATES	REMARKS
RYE (SECALE CEREALE) ALONE	3 BU. (168 LBS.)	3.9 LB.	8/15 - 12/31	18,000 SEED PER POUND QUICK COVER, DROUGHT TOLERANT AND WINTERHARDY.
IN MIXTURES	1/2 BU. (28 LBS.)	0.6 LB.		
RYEGRASS, ANNUAL (LOLIUM TEMULENTUM) ALONE	40 LBS.	0.9 LB.	1/1 - 4/15 & 8/1 - 12/31	227,000 SEED PER POUND, DENSE COVER, VERY COMPETITIVE IN MIXTURES.
IN MIXTURES	10 LBS.	0.2 LB.		

Ds2 TEMPORARY SEEDING

SPECIES	BROADCAST RATES (PURE LIVE SEED RATES) PER ACRE	PER 1000 S.F.	PLANTING DATES	REMARKS
BERMUDA, COMMON (CYNODON DACTYLON) UNHULLED SEED WITH TEMPORARY COVER	10 LBS.	0.2 LB.	1/1 - 2/29 & 10/1 - 12/31	PLANT WITH WINTER ANNUALS.
WITH OTHER PERENNIALS	6 LBS.	0.1 LB.		
BERMUDA SPRIGS (CYNODON DACTYLON) COASTAL, COMMON MIDLAND, OR TIFT 44	40 CU.FT. OR SOD PLUGS 3"X3"	0.9 CU.FT.	3/15 - 7/31	A CUBIC FOOT CONTAINS APPROXIMATELY 650 SPRIGS (BUSHELS). PROGRAM A CUBIC FEET OR APPROXIMATELY 650 SPRIGS.
CENTIPEDE (EREMOCHLOA OPHIUROIDES)	BLOCK SOD ONLY		4/1 - 6/30	DROUGHT TOLERANT, FULL SUN OR PARTIAL SHADE, EFFECTIVE ADJACENT TO CONCRETE. IRRIGATE UNTIL ESTABLISHED.
FESCUE, TALL (FESTUCA ARUNDINACEA) ALONE	50 LBS.	1.1 LB.	8/15 - 10/31	227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. NOT FOR HEAVY USE AREAS OF ATHLETIC FIELDS.
WITH OTHER PERENNIALS	30 LBS.	0.7 LB.		

Ds3 PERMANENT SEEDING

MONITORING GENERAL NOTES

The total site size is 13.98 acres. Representative sampling may be utilized on this project. The characteristics of the individual watersheds along the project corridor have been carefully evaluated and compared on the basis of drainage characteristics, watershed size, land disturbance and earth work. After evaluation of these items as presented in the projects drainage area maps, hydrology and hydraulic studies, construction plans and erosion sedimentation and pollution control plans, it has been determined that the increase in turbidity at the specified locations will be representative of the increase in turbidity for all waters leaving the site. Approved primary and alternate representative monitored features are identified in the table below:

SAMPLING INFORMATION												OUTFALL CHARACTERISTICS					
Primary Monitored Feature	Location (Station and Offset)	Drainage Basin in which Monitoring Location Resides	Name of Receiving Water	Applicable Construction Stage for Monitoring	Sampling Type (Outfall or Receiving water)	Drainage Area for receiving water (mi^2)	Total Project Area (acres)	Warm or Cold Water Stream	Appendix B NTU Value (Outfall monitoring only)	Allowable NTU Increase (Receiving water monitoring only)	Location Description	Construction Activity	Disturbed Area (ac)	Average Outfall Slope (Rise/Run)	Soil Erosion Index	Outfall Drainage Basins	Drainage Area (acres)
E-10*	59+73, 76' LT	B	JOHNS CREEK	ALL	Outfall	6.49	13.98	Warm	100	N/A	OUTLET HEADWALL	ROAD WIDENING	2.50	3.5	2	B	6.68
F-4**	65+14, 33' LT	C	JOHNS CREEK	ALL	Outfall			Warm	100	N/A	EXISTING MANHOLE	ROAD WIDENING	0.29	7.5	2	C	0.46
F-4.1**	66+44, 32' LT	D	JOHNS CREEK	ALL	Outfall			Warm	100	N/A	EXISTING CATCH BASIN	ROAD WIDENING	0.17	2.3	2	D	0.55
H-2*	75+90, 90' RT	E	JOHNS CREEK	ALL	Outfall			Warm	100	N/A	OUTLET HEADWALL	ROAD WIDENING	0.33	2.5	2	E	0.71
G-14**	84+27, 52' LT	F	JOHNS CREEK	ALL	Outfall			Warm	100	N/A	EXISTING CATCH BASIN	ROAD WIDENING	1.68	1.8	2	F	3.74
CATCH BASIN**	85+61, 30' RT	G	JOHNS CREEK	ALL	Outfall			Warm	100	N/A	EXISTING CATCH BASIN	ROAD WIDENING	0.26	2.6	2	G	1.07

*Identified Structures not constructed until Stage 2. However, monitoring location is applicable for all stages.

**Existing drainage structure to be monitored. In the case of F-4.1 and G-14, the existing structures will be replaced with new structures. Monitoring is applicable for all stages. Sampling locations meet the permit requirements for outfall sampling locations. Structures F-4 and F-4.1 are representative of drainage basin A.

RETENTION OF RECORDS

The Department will retain all records related to the implementation of this ESPCP in accordance with Part IV.F of the General Permit GAR100002.

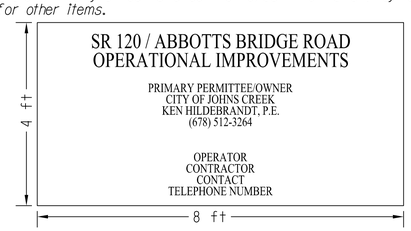
DISCHARGES INTO, OR WITHIN ONE LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT.

All outfalls are located within 1 linear mile upstream of an Impaired Stream Segment that has been listed for criteria violated, "Bio F" (Impaired Fish Community) and/or "Bio M" (Impaired Macro invertebrate Community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff).

Johns Creek is listed as a "Bio F", Category 4a stream due to urban runoff. A TMDL plan has not been completed for Johns Creek.

Additional BMPs are required as listed in Permit No. GAR100002 Part III.C.2.(a)-(t). For this project, BMPs (d), (e), (f), and (r) from this list will be implemented.

(d) Place a large sign (minimum 4 ft x 8 ft) on the site visible from the roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s) until a NOT has been submitted. An example is shown below. Contractor shall coordinate with City of Johns Creek for exact information. Payment to be included in price bid for other items.



(e) Use mulch to stabilize areas left disturbed for more than seven (7) calendar days in accordance with Part III.D.1. of Permit No. GAR100002..

(f) Conduct turbidity and Total Suspended Solids (TSS) sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specefied in Part IV.D.6.d. of Permit No. GAR100002.

(r) Certified personnel shall conduct inspections at least once every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a.(2).(a)-(c) of Permit No. GAR100002.

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GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

REVISION DATES

CITY OF JOHNS CREEK
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SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 51-002

3/1/2007 GPLN

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: Fulton County SWCD

Project Name: SR 120 (ABBOTTS) OPER. IMPROVEMENTS **Address:** SR 120 (JONES BRG RD-PARSONS RD(WEST)

City/County: FULTON **Date on Plans:** 6/17/2015

TO BE SHOWN ON ES&PC PLAN

Plan Page #	Included Y/N		
51-003	Y	1	The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
ALL	Y	2	Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)
COVER	Y	3	The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
COVER	Y	4	Provide the name, address and phone number of primary permittee.
53-001	Y	5	Note total and disturbed acreage of the project or phase under construction.
COVER	Y	6	Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees.
ALL	Y	7	Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
51-001	Y	8	Description of the nature of construction activity.
COVER	Y	9	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
51-002	Y	10	Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected.
COVER	Y	11	Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.
COVER	Y	12	Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on page 15 of the permit.*
COVER	Y	13	Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on page 26 of permit as applicable.*
51-001	Y	14	Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs, and sediment basins in accordance with part IV.A.5. within 7 days after installation."*
51-002	Y	15	Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits."
51-001	Y	16	Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."*
51-001	Y	17	Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."*
51-001	Y	18	Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
51-001	Y	19	Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
51-001	Y	20	Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
51-003	Y	21	Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.*
	N/A	22	If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 21 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan.*
51-002	Y	23	BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.*
51-001	Y	24	Provide BMPs for the remediation of all petroleum spills and leaks.
51-001	Y	25	Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.*
51-001	Y	26	Description of the practices that will be used to reduce the pollutants in storm water discharges.*
51-002	Y	27	Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
51-001	Y	28	Provide complete requirements of inspections and record keeping by the primary permittee.*
51-002	Y	29	Provide complete requirements of sampling frequency and reporting of sampling results.*
51-002	Y	30	Provide complete details for retention of records as per Part IV.F. of the permit.*
51-002	Y	31	Description of analytical methods to be used to collect and analyze the samples from each location.*
51-002	Y	32	Appendix B rationale for NTU values at all outfall sampling points where applicable.*
51-001	Y	33	Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged also provide a summary chart of the justification and analysis for the representative sampling as applicable.*
51-001	Y	34	A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase.*
ALL	Y	35	Graphic scale and North arrow.
ALL	Y	36	Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Existing Contours	USGS 1": 2000' Topographical Sheets
Proposed Contours	1" : 400' Centerline Profile

51-001	Y	37	Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
53-001	Y	38	Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
53-001	Y	39	Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
53-001	Y	40	Delineation and acreage of contributing drainage basins on the project site.
53-001	Y	41	Delineate on-site drainage and off-site watersheds using USGS 1' :2000' topographical sheets.
53-001	Y	42	An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
51-002	Y	43	Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
ALL	Y	44	Soil series for the project site and their delineation.
ALL	Y	45	The limits of disturbance for each phase of construction.
51-001	Y	46	Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasable, a written justification explaining this decision must be included in the plan.
ALL	Y	47	Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
56-001	Y	48	Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
51-002	Y	49	Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

*If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.

Effective January 1, 2015

APPENDIX 1

THE ES&PC PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPS FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO A IMPAIRED STREAM SEGMENT AND FOR SITES WHICH EPD HAS APPROVED IN WRITING A REQUEST TO DISTURB 50 ACRES OR MORE AT ANY ONE TIME.

The four items chosen must be appropriate for the site conditions.

Plan Page #	Included Y/N		
		a.	During construction activities, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as "trout streams" requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width.
		b.	Increase all temporary sediment basins and retrofitted storm water management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.
		c.	Use baffles in all temporary sediment basins and retrofitted storm water management basins to at least double the conventional flow path length to the outlet structure.
51-002	Y	d.	A large sign (minimum 4 feet x 8 feet) must be on the site on the actual start date of construction visible from a public roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s) until a NOT has been submitted.
51-002	Y	e.	Use anionic polyacrylamide (PAM) and/or mulch to stabilize areas left disturbed for more than seven (7) calendar days in accordance with Part III. D.1. of the NPDES Permit.
51-002	Y	f.	Conduct turbidity sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Part IV.D.6.d. of the NPDES Permits.
		g.	Comply with the applicable end-of-pipe turbidity effluent limit, without the "BMP defense" as provided for in O.C.G.A. 12-7-6 (a)(1).
		h.	Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the plan.
		i.	Limit the amount of disturbed area at any one time to no greater than 25 acres or 50% of the total planned is less. All calculations must be included on the plan.
		j.	Use 'Dirt II' techniques available on the EPD website, www.gaepd.org (e.g., seep berms, sand filters, anionic PAM) to model and manage construction storm water runoff (including sheet flow). All calculations must be included on the Plan.
		k.	Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post-construction soil sampling to a depth of six (6) inches to document improved levels of soil carbon after final stabilization of the construction site.
		l.	Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction storm water (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
		m.	Apply the appropriate Georgia Department of Transportation approved erosion control matting or blankets or bonded fiber matrix to all slopes steeper than 3:1. All graphical illustrations must be included on the Plan.
		n.	Use appropriate erosion control matting or blankets instead of concrete in all construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
		o.	Use anionic PAM under a passive dosing method (e.g., flocculant blocks) within construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
		p.	Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever storm water (including sheet flow) may be discharged.
		q.	Conduct soil tests to identify and to implement site-specific fertilizer needs.
51-002	Y	r.	Certified personnel for primary permittees shall conduct inspections at least twice every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a.(3).(a) – (c); secondary permittees, Part IV.D.4.b.(3). (a) – (c); and tertiary permittees Part IV.D.4.c.(3).(a) – (c) .
		s.	Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.
51-001	Y	t.	Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by aDesign Professional (unless disapproved by EPD or the State Soil and Water Conservation Commission). (If using this item please refer to the Alternative BMP guidance document found at www.gaswcc.georgia.gov)
		u.	Limit the total planned site disturbance to less than 15% impervious surfaces (excluding any state mandated buffer areas from such calculations). All calculations must be included in the plan.

Effective January 1, 2015

MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

REVISION DATES

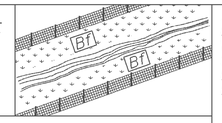
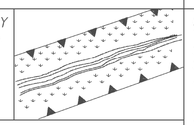
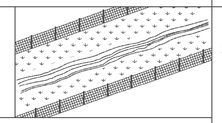
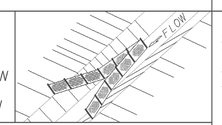
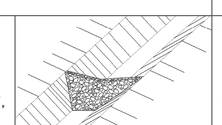
CITY OF JOHNS CREEK
PUBLIC WORKS

ESPC GENERAL NOTES

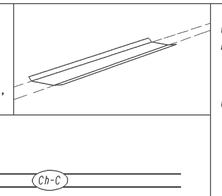
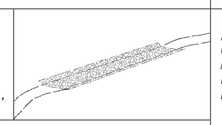
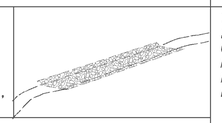
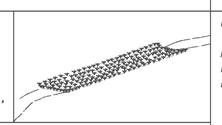
SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 51-003

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	183	241

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Bf	BUFFER ZONE SYMBOL Bf		A STRIP OF UNDISTURBED ORIGINAL VEGETATION, ENHANCED OR RESTORED EXISTING VEGETATION, OR THE RE-ESTABLISHMENT OF VEGETATION SURROUNDING AN AREA OF DISTURBANCE OR BORDERING STREAMS, PONDS, WETLANDS, LAKES, AND COASTAL WATERS. THE BOUNDARIES OF THESE AREAS ARE BE DELINEATED BY ORANGE BARRIER FENCE.
	ESA	ENVIRONMENTALLY SENSITIVE AREA LINE CODE ESA-25'(OR 50')STREAM BUFFER, ETC.		ENVIRONMENTALLY SENSITIVE AREA (ESA) CONTAINS RESOURCES THAT ARE ENVIRONMENTALLY, CULTURALLY, OR HISTORICALLY SENSITIVE. ESA AREAS INCLUDE, BUT ARE NOT LIMITED TO: STATE WATER BUFFERS, ARCHAEOLOGICAL SITES, HISTORIC SITES, AND PROTECTED ANIMAL AND PLANT SPECIES HABITATS. IF WORK IS AUTHORIZED IN THIS AREA, THE WORK MUST BE PERFORMED IN ACCORDANCE WITH SECTION 107 AND ANY OTHER APPLICABLE SPECIAL PROVISIONS AND APPLICABLE PLAN NOTES.
		ORANGE BARRIER FENCE LINE CODE ORANGE BARRIER FENCE		ORANGE BARRIER FENCE DELINEATES ESA AREAS WHERE THE CONTRACTOR SHALL NOT CLEAR, GRUB, PLACE CONSTRUCTION MATERIALS OR EQUIPMENT WITHIN THIS AREA.
	Cd-F	FABRIC CHECK DAM CONSTRUCTION DETAIL SECTION 171 LINE CODE Cd-F		A CHECK DAM COMPOSED OF SYNTHETIC FIBER FABRIC, WIRE REINFORCED, POST, AND BRACING PLACED IN DITCHES IN A SPECIAL CONFIGURATION WHICH CONTROLS ENERGY DISSIPATION AND FILTRATION OF STORM WATER. SEE CONSTRUCTION DETAIL D-24b FOR SPACING REQUIREMENT. THIS ITEM IS SUITABLE FOR USE IN ROADSIDE DITCHES THAT ARE PART OF INFRASTRUCTURE CONSTRUCTION PROJECTS. IF THIS ITEM IS USED IN AN AREA WITHOUT A SEDIMENT BASIN CONSIDERATION SHOULD BE GIVEN TO USING TWO OR MORE ROCK FILTER DAMS NEAR THE DISCHARGE POINT.
	Cd-S	STONE OR SANDBAG CHECK DAM SECTION 163, 603 LINE CODE Cd-S		STONE CHECK DAMS ARE USED IN ROADWAY DITCHES. GEOTEXITLE UNDERLINER SHALL BE USED WHEN PLACING STONE CHECK DAMS. CONTRACTOR MAY USE SANDBAG CHECK DAMS IN LIEU OF STONE CHECK DAMS. SANDBAG CHECK DAMS MUST BE USED IN CONCRETE LINED CHANNELS.

NOTE:
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION CONTROL MEASURES SEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Ch-C	CHANNEL CONCRETE SECTION 161, 441 Ch-C		THIS ITEM CONSISTS OF CONSTRUCTING A 4" THICK CONCRETE CHANNEL. THE CONCRETE SHALL PROTECT THE DITCH FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT DITCH PROTECTION PROGRAM "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS
	Ch-Rp1	CHANNEL RIP RAP TYPE 1 SECTION 161, 603 LINE CODE Ch-Rp1		THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 1 RIP RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP RAP SHALL PROTECT THE DITCH FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT DITCH PROTECTION PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED ALONG THIS CHANNEL SUCH AS Sdl-C, Rdc OR Sg. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS
	Ch-Rp3	CHANNEL RIP RAP TYPE 3 SECTION 161, 603 LINE CODE Ch-Rp3		THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 3 RIP RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP RAP SHALL PROTECT THE DITCH FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT DITCH PROTECTION PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED ALONG THIS CHANNEL SUCH AS Sdl-C, Rdc OR Sg. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS
	Ch-V	CHANNEL GRASS SECTION 161, 700 LINE CODE Ch-V		USED TO IMPROVE OR STABILIZE A NEW OR EXISTING CHANNEL. IT IS CONSTRUCTED IN STORMWATER DRAINAGE DITCHES. THIS MEASURE SHALL BE DESIGNED IN ACCORDANCE WITH THE GDOT DITCH PROTECTION PROGRAM ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. TYPICALLY NOT SHOWN IN PLANS.

BY	REVISION	DATE
TC	UPDATED DRAWING NO.	1-24-13
TC	REVISED Cd-S DESCRIPTION, REMOVED Be & Ch-Br. AND RELOCATED Ch-Rp, Ch-RP3 AND Ch-V CODES FROM ECLAUC SHEET 2 OF 6.	10-2-12
GLO	REV. Be, ADDED Bf, ESA, OBF AND Ch-F	11-13-07
GLO	REVISED TITLE BLOCK	1-19-07

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

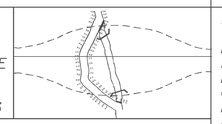
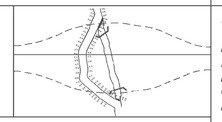
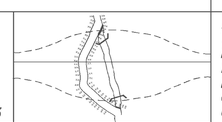
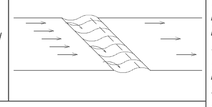
EROSION CONTROL LEGEND AND UNIFORM CODE SHEET
SHEET 1 OF 6

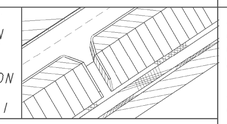
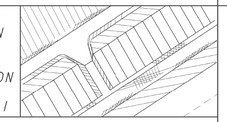
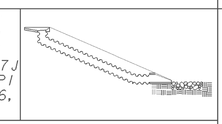
NO SCALE — JANUARY 2007

NUMBER EC-L1

DRAWING No. 52-001

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	184	241

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Co	CONSTRUCTION EXIT CONSTRUCTION DETAIL LINE CODE Co		A STONE STABILIZED PAD LOCATED AT ANY POINT WHERE TRAFFIC WILL BE EXITING A CONSTRUCTION SITE TO A PUBLIC ROAD. BEST USED AT ACCESS POINTS. I.e. NEW LOCATION PROJECTS. BORROW PITS, WASTE PITS, ACCESS ROADS, ETC. SHOULD BE MIN. 20' WIDE AND 50' LONG, AND 6" THICK. REQUIRES A GEOTEXTILE UNDERLINER. INCLUDED IN THE PRICE FOR THE CONSTRUCTION EXIT.
	Dc-A	DIVERSION CHANNEL GEOTEXTILE, POLYETHYLENE FILM SECTION 163 LINE CODE —D——D——D—Dc-A—D——D——D—		A DIVERSION CHANNEL IS A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE OR POLYETHYLENE FILM. INSTALL TWO ROWS OF Sdi-C PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS DESIGNED FOR A TWO YEAR STORM FREQUENCY WITH A FLOW RATE BETWEEN 0-2.5 fps. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
	Dc-B	DIVERSION CHANNEL GEOTEXTILE ONLY SECTION163 LINE CODE —D——D——D—Dc-B—D——D——D—		A DIVERSION CHANNEL IS A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE ONLY. INSTALL TWO ROWS OF Sdi-C PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS DESIGNED FOR A TWO YEAR STORM FREQUENCY WITH A FLOW RATE BETWEEN 2.5-9.0 fps. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
	Dc-C	DIVERSION CHANNEL RIPRAP AND GEOTEXTILE SECTION 163 LINE CODE —D——D——D—Dc-C—D——D——D—		A DIVERSION CHANNEL IS A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH RIPRAP AND GEOTEXTILE. INSTALL TWO ROWS OF Sdi-C PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE. CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS DESIGNED FOR A TWO YEAR STORM FREQUENCY WITH A FLOW RATE BETWEEN 9.0-13.0 fps. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
	Di	DIVERSION BERM CONSTRUCTION DETAIL SECTION 161, 205 LINE CODE DI		THIS IS A TEMPORARY EARTHEN BERM WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO BE USED AT AT THE EDGE OF EMBANKMENT DURING THE GRADING OPERATION. THE BERMS ARE ALSO CONSTRUCTED ABOVE, ACROSS OR BELOW A SLOPE TO REDUCE THE LENGTH OF A SLOPE. THEY ARE USED TO INTERCEPT RUNOFF, PREVENTING SLOPE EROSION AND TO DIRECT THE RUNOFF TO A STABLE OUTLET, DOWN DRAINS "Dnl"OR CATCHMENT AREAS AND ON ALL GRADING PROJECTS. SEE CHAPTER 6 OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA FOR DESIGN CRITERIA AND DETAILS.

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Dnl	DOWN DRAIN STRUCTURE FLEXIBLE CONSTRUCTION DETAIL SECTION 163 LINE CODE —T——T——T—Dnl—T——T——T—		A TEMPORARY PIPE SLOPE DRAIN IS A PLASTIC FLEXIBLE PIPE TO CARRY WATER FROM THE WORK AREA TO A LOWER ELEVATION. TEMPORARY SLOPE DRAINS SHOULD BE PLACED A INTERVALS OF 500 FEET ON A 0 TO 2 PERCENT GRADE, 200 FEET ON STEEPER GRADES AND MORE FREQUENTLY AS DICTATED BY FIELD CONDITIONS. THE USUAL PIPE SIZE IS 10 INCH CORRUGATED. THE OUTLET AREA SHOULD BE STABILIZED WITH SILT FENCE, SUMP HOLE, HAYBALES, ANGLING OUTLET IN UPHILL DIRECTION OR OTHER APPROPRIATE MEANS FOR VELOCITY DISSIPATION AND EROSION CONTROL. THE PIPE WILL BE ANCHORED WITH STAKES AT INTERVALS NOT TO EXCEED 10'.
	Dn2-A	PERMANENT DOWN DRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL SECTION 441 LINE CODE Dn2-A		A CONCRETE FLUME TYPE "A" IS USED TO DIRECT SURFACE RUNOFF DOWN A ROADWAY SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN ALL DEPRESSED AREAS WHERE WATER WILL FLOW DOWN THE SLOPE. IT IS DESIGNED FOR A 25 YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	Dn2-B	PERMANENT DOWN DRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL SECTION 441 LINE CODE Dn2-B		A CONCRETE FLUME TYPE "B" IS USED TO DIRECT SURFACE DITCH RUNOFF DOWN A BACK SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN DEPRESSED AREAS WHERE CONCENTRATED OFFSITE WATER REACHES THE CUT SLOPE. IT IS DESIGNED TO SAFETLY CONVEY WATER DOWN THE CUT SLOPE. IT IS DESIGNED FOR A 25 YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	Dn2-I	PERMANENT DOWNDRAIN STRUCTURE GA. STD. 9017J TP1, D-26 TP1 SECTION 576, 577. LINE CODE Dn2-I		CONCRETE DRAIN INLET WITH METAL PIPE IS USED TO DRAIN CURBS, ON A GRADE, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION. TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).

NOTE:
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION CONTROL MEASURES SEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

BY	REVISION	DATE
TC	UDATED DRAWING NO.	1-24-13
TC	REV. DI LABEL&DESCRIPTION.	10-1-12
	RELOCATED Dn2-A, Dn2-B, AND Dn2-I CODES FROM ECL&UC SHEET 3 OF 6.	
GLO	REVISED ORDER	11-13-07
GLO	REVISED TITLE BLOCK	1-19-07

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

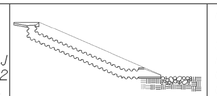
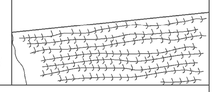
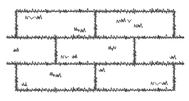
EROSION CONTROL LEGEND
AND UNIFORM CODE SHEET
SHEET 2 OF 6

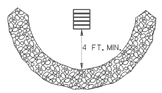
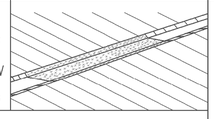
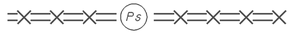
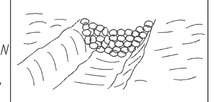
NO SCALE — JANUARY 2007

NUMBER EC-L2 — DRAWING No. 52-002

1/30/2013 1:53:37 PM \\GDOT-DSN1\GDPLOT\QCF\QGC.qcf tcox M:\TPC\Erosion control legend and uniform codes sheets\revision to ecl and code sheet\ECL52-003.prf

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	185	241

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Dn2-2	PERMANENT DOWN DRAIN STRUCTURE GA. STD. 9017J TP2, D-26 TP2 SECTION 576, 577.	 LINE CODE	CONCRETE DRAIN INLET AND METAL PIPE IS USED TO DRAIN CURB, IN A SAG, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION. TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	Ds1	MULCH SECTION 163	 LINE CODE	THIS IS AN APPLICATION OF STRAW MULCH USED TO REDUCE SOIL EROSION AND STABILIZE THE SOIL. IT IS USED TO CONTROL EROSION IN AREAS WHERE PERMANENT VEGETATION IS OUT OF SEASON OR TO TEMPORARILY STABILIZE AREAS PRIOR TO FINAL GRADING.
	Ds2	TEMPORARY GRASSING SECTION 163	LINE CODE	THE SOWING OF A QUICK GROWING SPECIES OF GRASS SUITABLE TO THE AREA AND SEASON IS TO BE USED ON ALL PROJECTS.
	Ds3	PERMANENT GRASSING SECTION 700	LINE CODE	THE SOWING OF PERMANENT VEGETATION, SUCH AS GRASS, SUITABLE TO THE AREA AND SEASON IS TO BE USED ON ALL PROJECTS. PERMANENT VEGETATIVE REQUIREMENTS ARE ADDRESSED BY STANDARD SPECIFICATIONS AND ARE NOT TYPICALLY SHOWN ON THE PLANS; HOWEVER, THEY MAY BE SHOWN ON THE PLANS FOR HIGHLY SENSITIVE AREAS WHERE THESE VEGETATIVE PRACTICES ARE CRITICAL.
	Ds4	SODDING SECTION 700	 PATTERN	THE INSTALLATION OF A SPECIES OF GRASS SODDING SUITABLE TO THE AREA AND SEASON TO PROVIDE IMMEDIATE PERMANENT VEGETATION. SODDING MAY BE SHOWN FOR HIGHLY SENSITIVE AREAS, TO IMPROVE AESTHETICS, OR FOR SPECIAL PLANTING REQUIREMENTS ON THE BASIS OF ENVIRONMENTAL COMMITMENTS OR LANDSCAPING REQUIREMENTS.

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Fr	FILTER RING CONSTRUCTION DETAIL	 LINE CODE	A TEMPORARY STONE BARRIER CONSTRUCTED AT DRAINAGE STRUCTURE INLETS. THIS REDUCES THE VELOCITY OF THE RUNOFF AND FILTERS SEDIMENT FROM THE RUNOFF. SEE CHAPTER 6 OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA FOR DESIGN CRITERIA AND DETAILS.
	Mb	EROSION CONTROL MATS CONSTRUCTION DETAIL SECTION 716	PATTERN	ALL CUT OR FILL SLOPES OF 2.5:1 OR STEEPER AND WITHIN 50' OF ALL CROSS DRAINS AND CULVERTS.
	Ps	PERMANENT SOIL REINFORCING MAT CONSTRUCTION DETAIL SECTION 710	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Rd	ROCK FILTER DAM CONSTRUCTION DETAIL SECTION 163, 603.	 LINE CODE	ROCK FILTER DAMS ARE CONSTRUCTED OF TYPE 3 STONE RIP RAP AND ARE USED TO PROTECT SMALL STREAMS OR DRAINAGEWAYS. TO BE USED IN SMALL DRAINAGE CHANNELS OF 50 ACRES OR LESS. THE RIP RAP SHOULD BE PLACED ON A GEOTEXITLE UNDERLINER.

NOTE:
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION CONTROL MEASURES, SEEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

BY	REVISION	DATE
TC	UDATED DRAWING NO., ADDED Ds3 & Ds4 CODES, RELOC. Rp & Rt-P CODES to DRAWING NO. 52-004.	1-24-13
TC	RELOCATED Rd, Ro, & Rt-B CODES FROM ECL&UC SHEET 4 OF 6.	10-2-12
GLO	DELETED Fe, REVISED ORDER	11-13-07
GLO	REVISED TITLE BLOCK	1-19-07

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

EROSION CONTROL LEGEND AND UNIFORM CODE SHEET
SHEET 3 OF 6

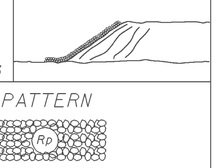
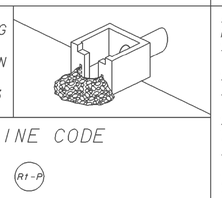
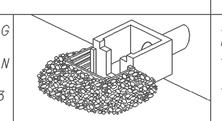
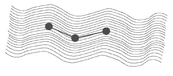
NO SCALE — JANUARY 2007

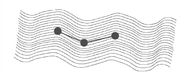
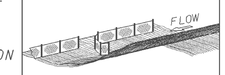
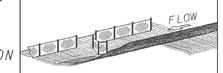
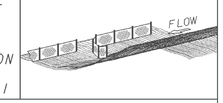
NUMBER EC-L3

DRAWING No. 52-003

1/30/2013 1:53:37 PM \\GDOT-DSN1\GDPLOT\QCF\QGC.qcf tcox M:\TPC\Erosion control legend and uniform codes sheets\revision to ecl and code sheet\ECL52-003.prf

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	186	241

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Rp	RIPRAP SECTION 603 PATTERN		RIP RAP IS A FLEXIBLE PERMANENT BLANKET FOR PROTECTION OF FILL SLOPES AND END ROLLS. RIP RAP, TYPE I SHOULD BE PLACED ON TOP OF A GEOTEXITLE UNDERLINER AT A MINIMUM 24" THICKNESS OR AS INDICATED ON THE PLANS.
	Rt-P	RETROFITTING CONSTRUCTION DETAIL SECTION 163 LINE CODE		A PERFORATED HALF-ROUND PIPE WITH STONE FILTER PLACED IN FRONT OF A PERMANENT STORMWATER DETENTION POND OUTLET STRUCTURE TO SERVE AS A TEMPORARY SEDIMENT FILTER. SHOULD BE USED ONLY IN DETENTION PONDS WITH LESS THAN 30 ACRES TOTAL DRAINAGE AREA. SHALL ONLY BE USED IN DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA. THIS ITEM SHOULD BE DESIGNED ACCORDING TO CHAPTER 6 IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA"
	Rt-B	RETROFITTING CONSTRUCTION DETAIL SECTION 163 LINE CODE		A SLOTTED BOARD DAM WITH STONE PLACED IN FRONT OF A PERMANENT STORMWATER DETENTION POND OUTLET STRUCTURE TO SERVE AS A TEMPORARY SEDIMENT FILTER. SHOULD BE USED ONLY IN DETENTION PONDS WITH LESS THAN 100 ACRES TOTAL DRAINAGE AREA. SHALL ONLY BE USED IN DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA. THIS ITEM SHOULD BE DESIGNED ACCORDING TO CHAPTER 6 IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA"
	Rt-BSg1 Rt-BSg2 Rt-BSg3	SILT CONTROL GATES CONSTRUCTION DETAIL D-20 SECTION 163 LINE CODE	 FRONT VIEW	A SILT CONTROL GATE IS A STRUCTURE PLACED ON A PIPE, SMALL BOX CULVERT, OR DROP INLET TO FORM A BASIN TO CATCH SILT AND PREVENT IT FROM LEAVING THE CONSTRUCTION SITE. IT IS EFFECTIVE ON SMALL DRAINAGE AREAS ONLY. DO NOT USE IN STATE WATERS. Rt-BSg1=TYPE 1: USED ON BOX CULVERTS Rt-BSg2=TYPE 2: USED ON STRAIGHT HEADWALLS Rt-BSg3=TYPE 3: USED ON FLARED END SECTIONS AND TAPERED HEADWALLS
	Sb-F	SILT RETENTION BARRIER FLOATING SECTION 170 LINE CODE	 FLOATING	A FLOATING BARRIER IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY FORCING IT TO DROP OUT OF SUSPENSION BEFORE IT MOVES OUT OF THE CONSTRUCTION AREA. IT IS USUALLY USED WHERE CONSTRUCTION IS REQUIRED IN A LARGE BODY OF WATER SUCH AS LAKES AND RIVERS. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. THIS ITEM IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED BMP'S.

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Sb-S	SILT RETENTION BARRIER STAKED SECTION 170 LINE CODE	 STAKED	A STAKED BARRIER IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY FORCING IT TO DROP OUT OF SUSPENSION BEFORE IT MOVES OUT OF THE CONSTRUCTION AREA. IT IS USUALLY USED WHERE CONSTRUCTION IS REQUIRED IN SHALLOW INUNDATED AREAS. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. A STAKED BARRIER MAY BE USED TO PROTECT A SMALL STREAM WHILE IT IS BEING REALIGNED OR WIDENED IN "Chl". IN THIS CASE THE BARRIER SHOULD EXTEND TO THE BOTTOM OF THE STREAM. IT SHOULD BE LIMITED TO 5' IN HEIGHT UNLESS OTHERWISE DIRECTED. STAKED BARRIERS IN SMALL STREAMS SHOULD EXTEND 1' ABOVE NORMAL WATER. THIS ITEM IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED BMP'S.
	Sdl-A	SILT FENCE TYPE A CONSTRUCTION DETAIL SECTION 171 LINE CODE	 	USED ALONG THE TOE OF FILLS LESS THAN 10' HIGH, ALONG THE RIGHT OF WAY LINE OR PARALLEL TO STREAMS. THE FENCE SHOULD NEVER RUN CONTINUOUS. IT SHOULD TURN BACK INTO THE FILL TO CREATE SMALL POCKETS TO TRAP SILT.
	Sdl-B	SILT FENCE TYPE B CONSTRUCTION DETAIL SECTION 171 LINE CODE	 	TYPE B MAY BE USED IN LIEU OF BALED STRAW AND AT THE TOE OF FILLS LESS THAN 10 FEET HIGH.
	Sdl-C	SILT FENCE TYPE C CONSTRUCTION DETAIL SECTION 171 LINE CODE	 	A WOVEN SYNTHETIC FIBER FABRIC PLACED IN FRONT OF A WIRE FENCE. IT CAN BE USED ALONG THE TOE OF THE FILL, ALONG THE RIGHT OF WAY LINE OR PARALLEL TO STREAMS. IT IS USED TO CAPTURE SEDIMENT FROM FILLS OVER 10 FEET HIGH AND UNDER ALL BRIDGES.

NOTE:
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION CONTROL MEASURES, SEEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

BY	REVISION	DATE
TC	UPDATED DRAWING NO. & RELOCATED Sdl-Bb&Sdl-Hb CODES TO DRAWING NO. 52-005.	1-24-13
TC	RELABELED AND RELOCATED Sg-1,Sg-2,Sg-3 TO Rt-BSg1, Rt-BSg2, & Rt-BSg3 CODES AND Sdl-Bb,Sdl-Hb CODES FROM ECL&UC SHT. 5 OF 6.	10-2-12
GLO	REV. Sdl-A	
GLO	REV. Sb-F, Sb-S, Sdl-A, Sbl-B AND Sdl-C.	11-13-07
GLO	REVISED TITLE BLOCK	1-19-07

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

EROSION CONTROL LEGEND
AND UNIFORM CODE SHEET
SHEET 4 OF 6

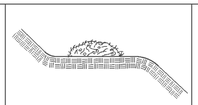
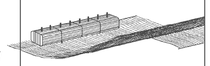
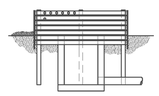
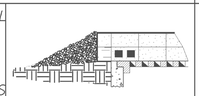
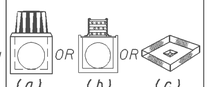
NO SCALE — JANUARY 2007

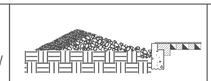
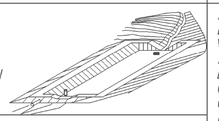
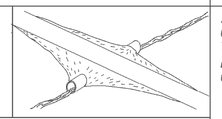
NUMBER EC-L4

DRAWING No. 52-004

1/30/2013 1:53:35 PM \\GDOT-DSN1\GDPLOT\QCF\QGC.qcf tcox M:\TPC\Erosion control legend and uniform codes sheets\revision to eel and code sheet\ECL52-005.prf

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	187	241

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Sd1-Bb	BRUSH BARRIER CONSTRUCTION DETAIL LINE CODE * * * Sd1-Bb * * *		THIS ITEM CONSISTS OF INTERMINGLED BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM. CONSTRUCTED AT THE TOE OF FILL SLOPES DURING THE CLEARING AND GRUBBING OPERATION. THE BARRIER SHOULD BE USED AT THE TOE OF FILL SLOPES ON GRADING PROJECTS IN RURAL AREAS WHERE SUFFICIENT RIGHT OF WAY OR EASEMENT IS AVAILABLE (10 FEET OR MORE). THE BARRIER SHOULD RUN ROUGHLY PERPENDICULAR TO THE FLOW OF WATER WHERE THIS DOES NOT CONFLICT WITH RIGHT OF WAY OR EASEMENT LIMITS. THEY WILL NOT BE PLACED IN WETLANDS. PAYMENT FOR THIS ITEM IS INCLUDED IN THE CLEARING AND GRUBBING COST. NO SEPERATE PAYMENT SHALL BE MADE.
	Sd1-Hb	SEDIMENT BARRIER CONSTRUCTION DETAIL SECTION 163 LINE CODE —S—S—S-Sd1-Hb-S—S—S—		A BARRIER OF BALED STRAW IS USED TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT IS USED IN DITCHES AS DITCH CHECKS OR ALONG THE TOE OF SLOPE OR RIGHT OF WAY IN FILLS LESS THAN 10 FEET HIGH. THE BALES SHOULD RUN PARALLEL TO THE SILT YIELDING AREA UNTIL THE TOP OF THE BALE IS 6 INCHES LOWER THAN THE GROUND ELEVATION OF THE BEGINNING BALE. THEY SHOULD THEN TURN INTO THE FILL WITH A LOW POINT FOR THE WATER TO DRAIN OVER THE BALE. IN DITCHES, BALED STRAW SHOULD BE PERPENDICULAR TO THE FLOW. USED FOR SLOPES LESS THAN 1%. USE 100' SPACING. BALED STRAW SHALL BE STAKED SECURELY TO THE GROUND.
	Sd2-B	BAFFLE BOX INLET SEDIMENT TRAP CONSTRUCTION DETAIL D42 SPECIFICATIONS SECTION 163 LINE CODE Sd2-B		USED FOR INLETS RECEIVING RUNOFF WITH A HIGHER VOLUME OR VELOCITY. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING A Q=7cfs.
	Sd2-Bg	BLOCK & GRAVEL DROP INLET PROTECTION CONSTRUCTION DETAIL D42 SPECIFICATIONS SECTION 163 LINE CODE Sd2-Bg		USED FOR INLET PROTECTION WHERE HEAVY FLOWS ARE EXPECTED AND WHERE OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. CAN BE USED AT CULVERT INLETS. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING A Q=5-7 cfs.
	Sd2-F	INLET SEDIMENT TRAP CONSTRUCTION DETAILS SECTION 163 (a) OR (b) OR (c) LINE CODE Sd2-F		(a) A SEDIMENT BARRIER CONSISTING OF A PREFABRICATED FRAME WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN (b) A SEDIMENT BARRIER CONSISTING OF A PERFORATED METAL STAND PIPE WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN (c) TYPE C SILT FENCE WITH SUPPORTING FRAME CAN BE USED AS AN ALTERNATE TO INLET SEDIMENT TRAP FOR AREAS WITH SLOPES < 5% THIS ITEM IS USED TO PREVENT SILT FROM ENTERING THE PIPE SYSTEM. SHALL NOT APPLY TO INLETS RECIEVING CONCENTRATED FLOWS. RECOMMENDED FOR INLET RECEIVING FLOWS THAT RANGE FROM Q=0-4 cfs.

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Sd2-G	GRAVEL DROP INLET PROTECTION CONSTRUCTION DETAIL D42 SPECIFICATIONS SECTION 163 LINE CODE Sd2-G		USED FOR INLET PROTECTION WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED. STONE AND GRAVEL ARE USED TO TRAP SEDIMENT. THE SLOPE TOWARD THE INLET SHALL BE NO MORE THAN 3:1. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING A Q=3-5 cfs.
	Sd3	SEDIMENT BASIN CONSTRUCTION DETAIL SECTION 163 LINE CODE Sd3		A BASIN EXCAVATED OR AN AREA THAT IS DAMMED. THE BASIN IS DESIGNED TO HOLD A SEDIMENT LOAD OF 67 CUBIC YARDS OF VOLUME PER ACRE OF DRAINAGE AREA. IT IS USED FOR DRAINAGE AREAS OF 3 TO 5 ACRES OR WHERE A ROADWAY CUTS OR FILLS EXCEEDS 1,000 FEET IN LENGTH. IF A SEDIMENT BASIN IS USED ON AN AREA LARGER THAN 5 ACRES SPECIAL CONSIDERATION FOR CLEAN OUT IS REQUIRED. SUFFICIENT RIGHT OF WAY OR PERMANENT EASEMENT NEEDED FOR THE BASIN AND ACCESS FOR CLEAN OUT VIA A ROUTE WITH 3:1 SLOPES OR LESS. SEDIMENT BASINS SHOULD ALSO BE CONSIDERED WHERE HIGH FILLS OVER 30 FEET DRAIN TO ONE LOCATION.
	Sr	STREAM CROSSING SECTION 161 LINE CODE Sr		A TEMPORARY BRIDGE OR PIPE STRUCTURE PROTECTING A STREAM OR WATER COURSE FROM DAMAGE BY CONSTRUCTION EQUIPMENT. THIS AREA MUST BE COMPLETELY STABILIZED. THIS ITEM MUST BE DESIGNED ACCORDING TO CHAPTER 6 OF THE MANUAL FOR EROSION CONTROL IN GEORGIA FOR CONTRACTOR'S USE ONLY

NOTE:
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION CONTROL MEASURES, SEEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

BY	REVISION	DATE
TC	UDATED DRAWING NO. & RELOCATED St & St-Rp CODES TO DRAWING NO. 52-006.	1-24-13
TC	DEL. Sg-1, Sg-2, Sg-3 CODES. RELOCATED St & St-Rp, CODES FROM ECL & UC	10-2-12
GLO	REV. Sg-1, Sg-2 AND Sg-3 SHT. 6 OF 6.	11-13-07
GLO	REVISED TITLE BLOCK	1-19-07

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

EROSION CONTROL LEGEND AND UNIFORM CODE SHEET

SHEET 5 OF 6

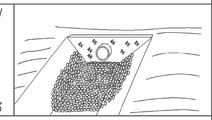
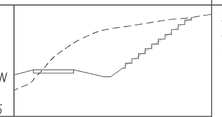
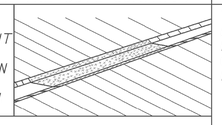
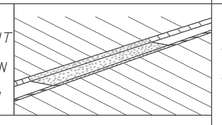
NO SCALE — JANUARY 2007

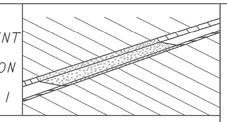
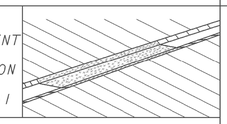
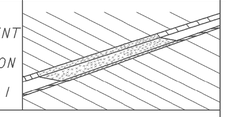
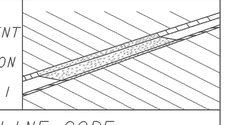
NUMBER EC-L5

DRAWING No. 52-005

1/30/2013 1:53:35 PM \\GDOT-DSN1\GDPLOT\QCF\QGC.qcf tcox M:\TPC\Erosion control legend and uniform codes sheets\revision to eel and code sheet\ECL52-005.prf

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	188	241

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	St	STORM DRAIN OUTLET PROTECTION GA. STD. 1125 & 2332	 LINE CODE St	A PIPE OR BOX CULVERT OUTLET HEADWALL WITH AN APRON AND DISSIPATOR BLOCKS IS USED TO PREVENT EROSION AND TO SLOW WATER. IT IS USED ON THE OUTLET OF ALL BOX CULVERTS AND ON 48" AND LARGER PIPES. MAY BE USED ON INLET FOR FLOWING STREAMS. USE ON SMALL PIPES WHEN OUTLET VELOCITY IS 12 fps AND GREATER.
	St-Rp	STORM DRAIN OUTLET PROTECTION SECTION 603	 PATTERN St-Rp	THIS ITEM IS ADDED TO "St" WHEN ADDITIONAL PROTECTION IS NEEDED. TYPE 1 RIP RAP PLACED ON FILTER FABRIC SHOULD BE USED AT A 24" THICKNESS. MAY BE USED ON INLETS FOR FLOWING STREAMS. REFER TO CHARTS IN "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR QUANTITIY DETERMINATION.
	Su	SURFACE ROUGHENING SERRATED SLOPES CONSTRUCTION DETAIL SECTION 205	 LINE CODE Su (LINE CODE Su IS SHOWN ON THE PLANS FOR SERRATED SLOPES WHERE SPECIFIED IN THE SOIL SURVEY.)	PROVIDING A ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS, BY OPERATING A CLEATED DOZER ON THE SLOPE IN A VERTICAL DIRECTION. CREATING SERRATED SLOPES IN THE GRADING PROCESS TO CONSTRUCT BENCHES WILL REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION OF WATER. IN MOST CASES THIS ITEM IS NOT REQUIRTED TO BE SHOWN ON THE PLANS, BUT REQUIRED TO BE COMPLETED BY THE CONTRACTOR UNDER ALL PROJECTS. IF SERRATED SLOPES ARE USED ON THE PROJECT, THEN THIS ITEM SHALL BE SHOWN WHERE SERRATED SLOPES ARE TO BE USED.
	Trm-1	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE Trm-1	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-2 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Trm-2	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE Trm-2	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-4 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Trm-3	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE Trm-3	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG TERM PROTECTION FOR SHEAR STRESSES 0-6 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Trm-4	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE Trm-4	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-8 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Trm-5	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE Trm-5	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-10 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Trm-6	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE Trm-6	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-12 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)

NOTE:
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION CONTROL MEASURES, SEEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

BY	REVISION	DATE
TC	UDATED DRAWING NO.	1-24-13
TC	ADDED Trm-1,Trm-2,Trm-3, Trm-4,Trm-5,AND Trm-6.	10-2-12
	CODES AND DESCRIPTIONS.	
	RELOCATED St & St-Rp	
	CODES TO ECL & UC SHT.	
	5 of 6.	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

EROSION CONTROL LEGEND AND UNIFORM CODE SHEET

SHEET 6 OF 6

NO SCALE

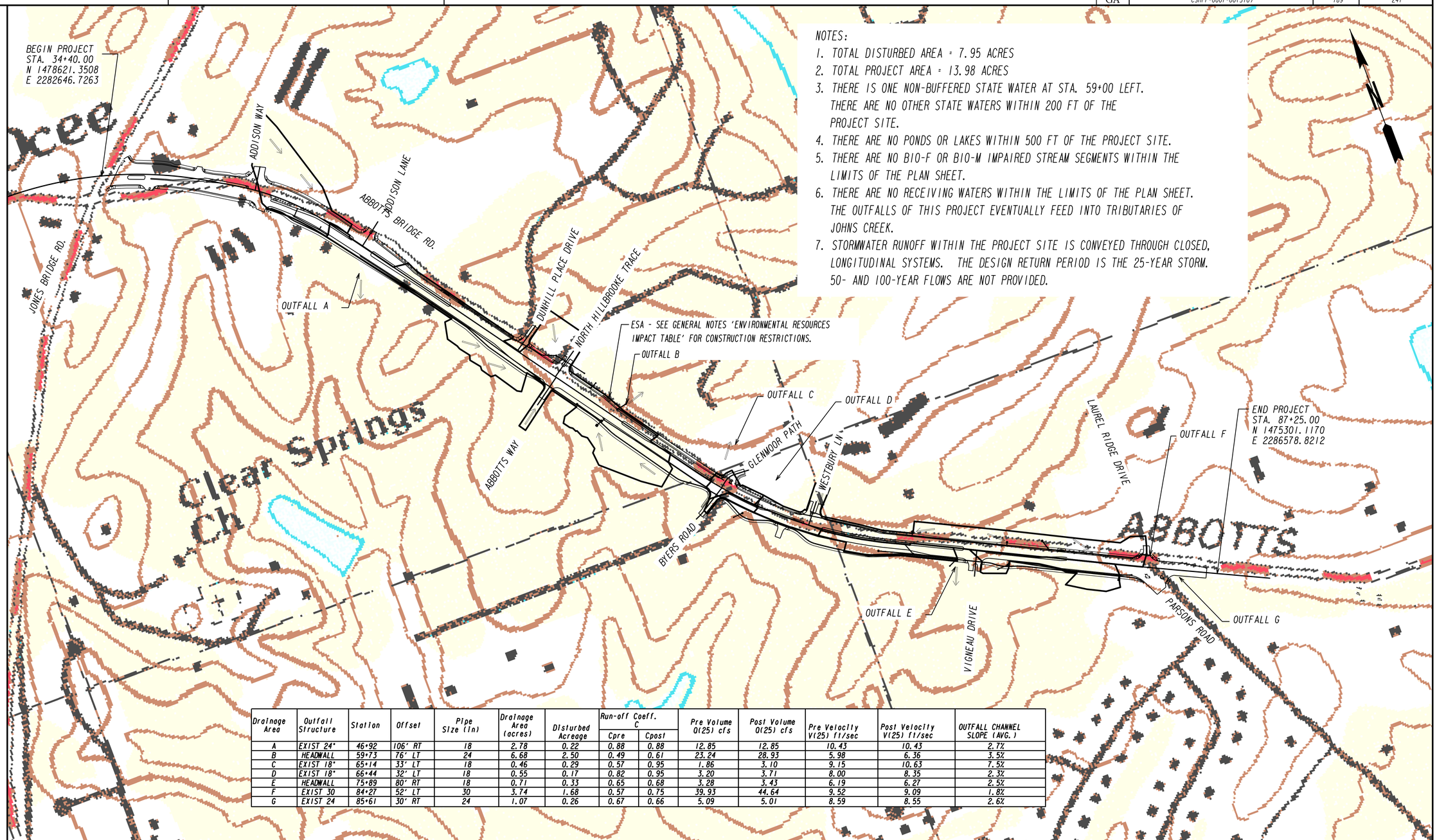
NOV., 2007

NUMBER EC-L6

DRAWING No. 52-006

NOTES:

1. TOTAL DISTURBED AREA = 7.95 ACRES
2. TOTAL PROJECT AREA = 13.98 ACRES
3. THERE IS ONE NON-BUFFERED STATE WATER AT STA. 59+00 LEFT. THERE ARE NO OTHER STATE WATERS WITHIN 200 FT OF THE PROJECT SITE.
4. THERE ARE NO PONDS OR LAKES WITHIN 500 FT OF THE PROJECT SITE.
5. THERE ARE NO BIO-F OR BIO-M IMPAIRED STREAM SEGMENTS WITHIN THE LIMITS OF THE PLAN SHEET.
6. THERE ARE NO RECEIVING WATERS WITHIN THE LIMITS OF THE PLAN SHEET. THE OUTFALLS OF THIS PROJECT EVENTUALLY FEED INTO TRIBUTARIES OF JOHNS CREEK.
7. STORMWATER RUNOFF WITHIN THE PROJECT SITE IS CONVEYED THROUGH CLOSED, LONGITUDINAL SYSTEMS. THE DESIGN RETURN PERIOD IS THE 25-YEAR STORM. 50- AND 100-YEAR FLOWS ARE NOT PROVIDED.



Drainage Area	Outfall Structure	Station	Offset	Pipe Size (in)	Drainage Area (acres)	Disturbed Acreage	Run-off Coeff. C		Pre Volume Q(25) cfs	Post Volume Q(25) cfs	Pre Velocity V(25) ft/sec	Post Velocity V(25) ft/sec	OUTFALL CHANNEL SLOPE (AVG.)
							Cpre	Cpost					
A	EXIST 24"	46+92	106' RT	18	2.78	0.22	0.88	0.88	12.85	12.85	10.43	10.43	2.7%
B	HEADWALL	59+73	76' LT	24	6.68	2.50	0.49	0.61	23.24	28.93	5.98	6.36	3.5%
C	EXIST 18"	65+14	33' LT	18	0.46	0.29	0.57	0.95	1.86	3.10	9.15	10.63	7.5%
D	EXIST 18"	66+44	32' LT	18	0.55	0.17	0.82	0.95	3.20	3.71	8.00	8.35	2.3%
E	HEADWALL	75+89	80' RT	18	0.71	0.33	0.65	0.68	3.28	3.43	6.19	6.27	2.5%
F	EXIST 30	84+27	52' LT	30	3.74	1.68	0.57	0.75	39.93	44.64	9.52	9.09	1.8%
G	EXIST 24	85+61	30' RT	24	1.07	0.26	0.67	0.66	5.09	5.01	8.59	8.55	2.6%

MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 200 400 800

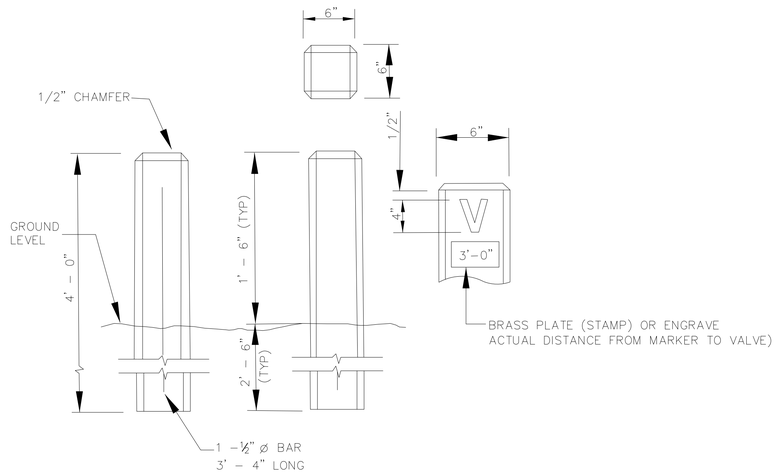
REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

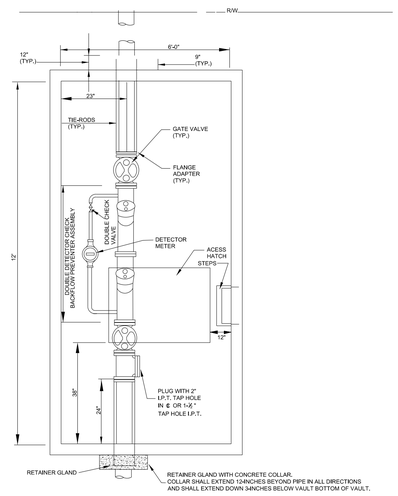
EROSION CONTROL DRAINAGE AREA MAP

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
53-001



FULTON COUNTY STANDARD DETAIL 821
WATER VALVE MARKER



1. TYPE I VAULT SHALL BE USED FOR 3,4,6 OR 8-INCH DOUBLE DETECTOR CHECK BACKFLOW PREVENTER FOR USE WITH 1, 1-½ AND 2-INCH METER.
2. SEE SPECIFICATION SECTION 02665 FOR MATERIAL SPECIFICATIONS. ALL MATERIAL TO BE FURNISHED BY CONTRACTOR.
3. ALL FITTING SHALL BE DUCTILE IRON WITH FLANGED JOINTS. GATE VALVES SHALL BE OUTSIDE STEM AND YOKE (OSY) WITH HANDWHEEL.
4. VAULT SHALL BE PRECAST CONCRETE. MIN. INSIDE HEIGHT SHALL BE 6 FEET. LOAD BEARING VAULT SHALL BE DESIGNED BY PROPERTY OWNER'S ENGINEER, AND SUBMITTED TO COUNTY FOR APPROVAL.
5. ACCESS HATCH/FLOOR DOOR SHALL BE MIN. 36" X 36".
6. VAULT FLOOR SHALL BE # 57 CRUSHED STONE, MIN. 6-INCHES THICK.
7. PROVIDE CONCRETE PIER UNDER BFP 12" X 12" X 18" HIGH.
8. PROVIDE RETAINER GLAND ON PIPE BEYOND VAULT WALLS. PROVIDE TWO TIE RODS FROM FIRST INTERIOR FLANGE TO RETAINER GLANDS, WITH DOUBLE NUTS AND WASHERS. ENCASE RETAINER GLANDS IN CONCRETE. ALSO, PROVIDE TIE RODS FROM RETAINER GLAND TO TAPPING VALVE OR CASING UNDER ROAD, WHICH-EVER IS CLOSER. RODS SHALL BE PROVIDED WITH BITUMASTIC COATING.
9. VAULT WALL OPENINGS SHALL BE SEALED WITH NON-SHRINK GROUT. ENSURE 1-INCH CLEARANCE BETWEEN TOP OF PIPE AND PRECAST WALL.
10. MANHOLE STEPS SHALL BE DOWELLED INTO VAULT WALL AND CENTERED ON ACCESS HATCH.

FULTON COUNTY STANDARD DETAIL 822
FIRE LINE VAULT-TYPE I

ASSUMPTIONS FOR STANDARD LENGTHS

PIPE: DUCTILE IRON, AWWA C-151
SOIL: GC & SC, CLAYEY GRAVELS, CLAYEY SANDS, GRAVEL-SAND-CLAY MIXTURES, SAND-CLAY MIXTURES.
AVERAGE DEPTH OF BURY: 4 FT
TRENCH TYPE: 4
TEST PRESSURE: 250 PSI
SAFETY FACTOR: 1.5:1 (BASED ON TEST PRESSURE)

NOTES:

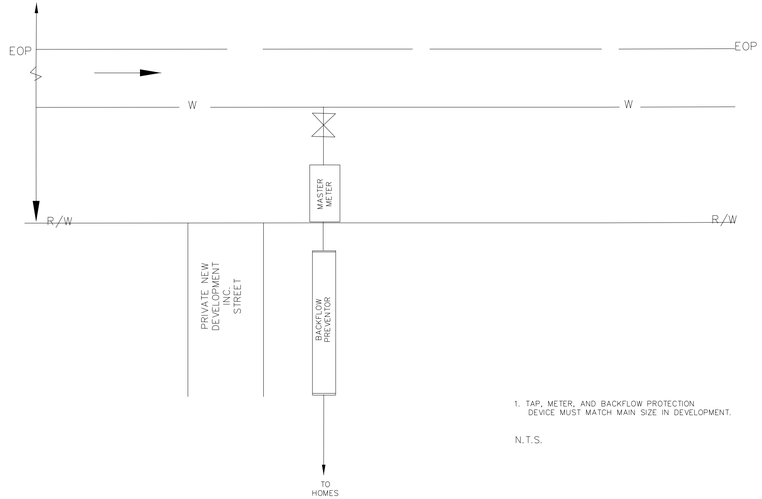
1. A FULL LENGTH OF PIPE ATTACHED TO EACH SIDE RUN OR BRANCH OUTLET SHALL BE INSTALLED, NO CUT OR PIECE OF PIPE SHALL BE USED.
2. WHERE FILL DIRT HAS BEEN ADDED TO SHOULDER, DEADMAN WILL BE INSTALLED 10 FT, FROM ANY BRANCH OUTLET OR END PIPE.
3. ALL JOINTS THAT FALL WITHIN THESE STANDARD LENGTH SHOULD BE RESTRAINED. (ON EACH SIDE OF BENDS ON THE BRANCH OUTLET OF TEES, AND BEFORE DEAD-ENDS).
4. STANDARD LENGTHS SHALL BE MODIFIED IF ACTUAL CONDITIONS DO NOT MEET MINIMUM REQUIREMENTS IN "ASSUMPTIONS FOR STANDARD LENGTHS".

RECOMMENDED RESTRAINED LENGTHS OF DUCTILE IRON PIPE

NOM. PIPE SIZE (IN)	90 DEG. BEND	45 DEG. BEND	22.5 DEG. BEND	11.25 DEG. BEND	SIZE ON SIZE TEE*	VALVE/ DEAD-END
6	19 FT	8 FT	4 FT	2 FT	3 FT	35 FT
8	25 FT	11 FT	5 FT	3 FT	13 FT	46 FT
10	30 FT	13 FT	6 FT	3 FT	23 FT	56 FT
12	36 FT	15 FT	7 FT	4 FT	34 FT	67 FT
14	41 FT	17 FT	8 FT	4 FT	43 FT	77 FT
16	46 FT	19 FT	9 FT	5 FT	53 FT	87 FT
18	51 FT	21 FT	10 FT	5 FT	63 FT	96 FT
20	56 FT	23 FT	11 FT	6 FT	72 FT	106 FT
24	65 FT	27 FT	13 FT	7 FT	91 FT	126 FT

*RECOMMENDED RESTRAINED LENGTHS FOR TEES ARE FOR THE BRANCH OUTLET AND ASSUME A MINIMUM 10 FT. SECTION OF PIPE ATTACHED TO EACH SIDE OF THE RUN. RESTRAINT DEVICES SHOULD ALSO BE INSTALLED ON BOTH RUN JOINTS OF THE TEE ITSELF.

FULTON COUNTY STANDARD DETAIL 823
RESTRAINED JOINT PIPE STANDARD LENGTHS



1. TAP, METER, AND BACKFLOW PROTECTION DEVICE MUST MATCH MAIN SIZE IN DEVELOPMENT.

N.T.S.

FULTON COUNTY STANDARD DETAIL 824
WATER SERVICES
TOWNHOME/APT./CONDOMINIUM
PRIVATE DEVELOPMENT

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REVISION DATES

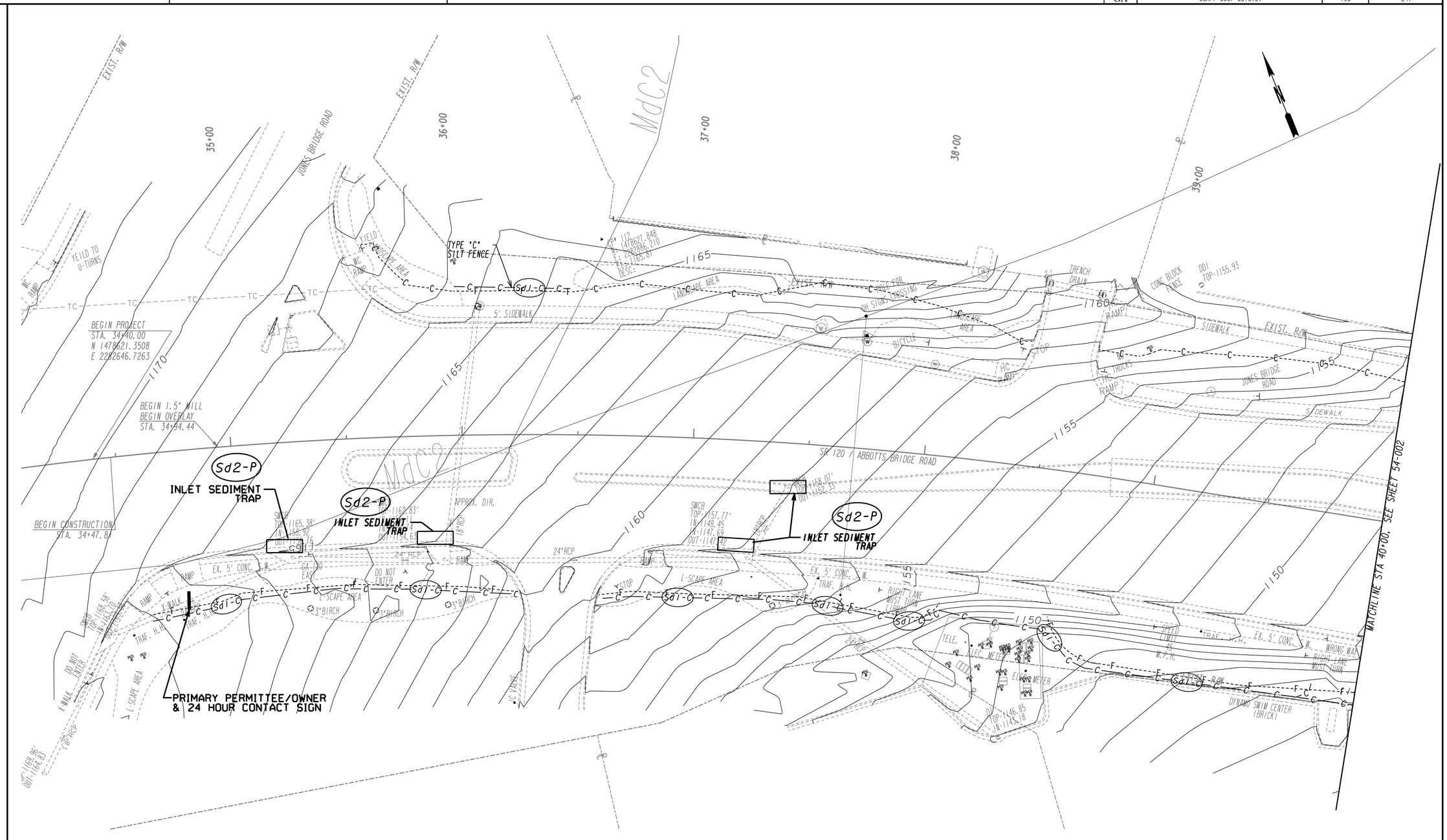
CITY OF JOHNS CREEK
PUBLIC WORKS

WATER RELOCATION PLANS

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
44-016

3/1/2007 GPLN



Mitchell Greenway

MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

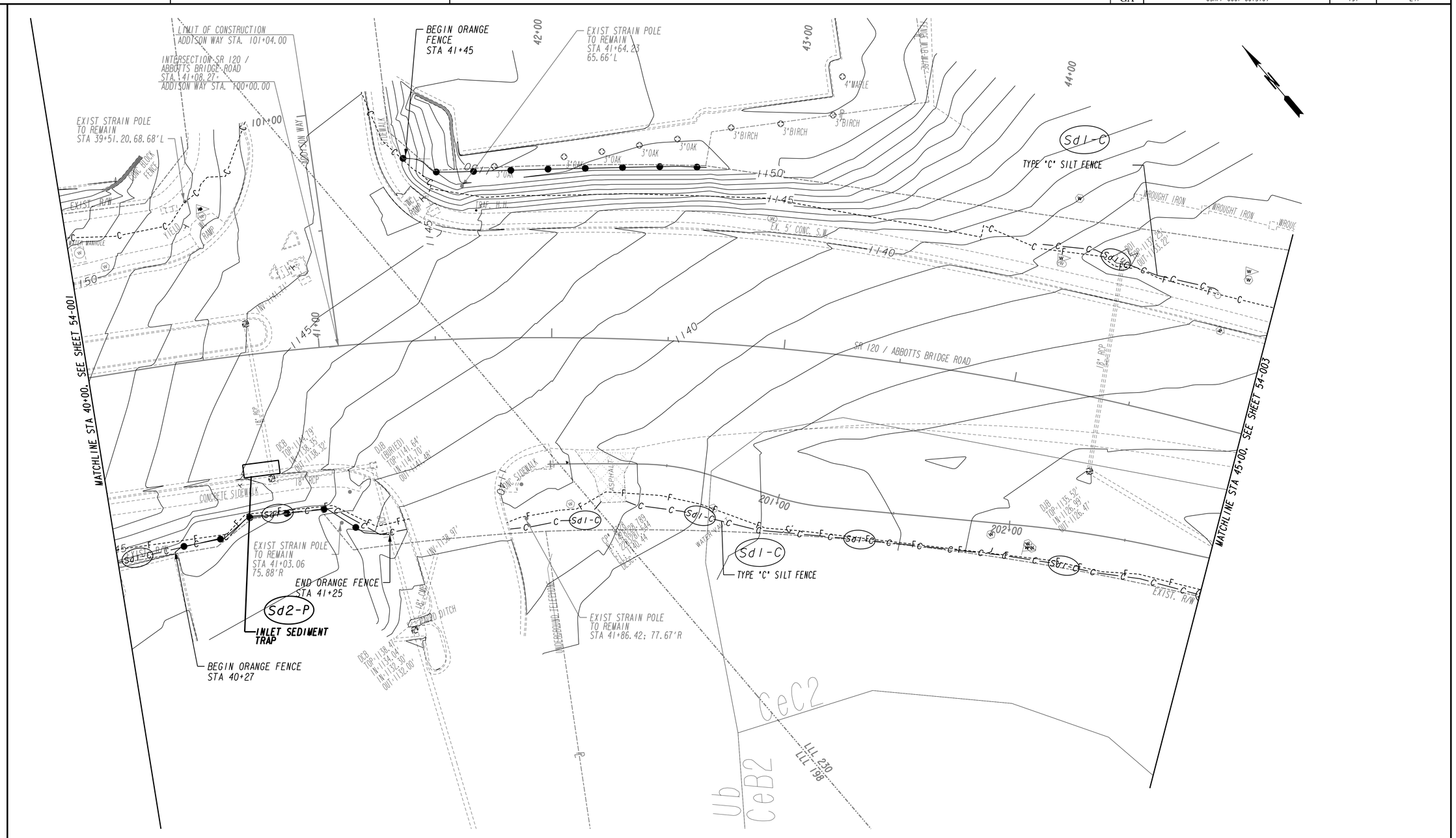
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-001

3/1/2007 GPLN



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SCALE IN FEET
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REVISION DATES		

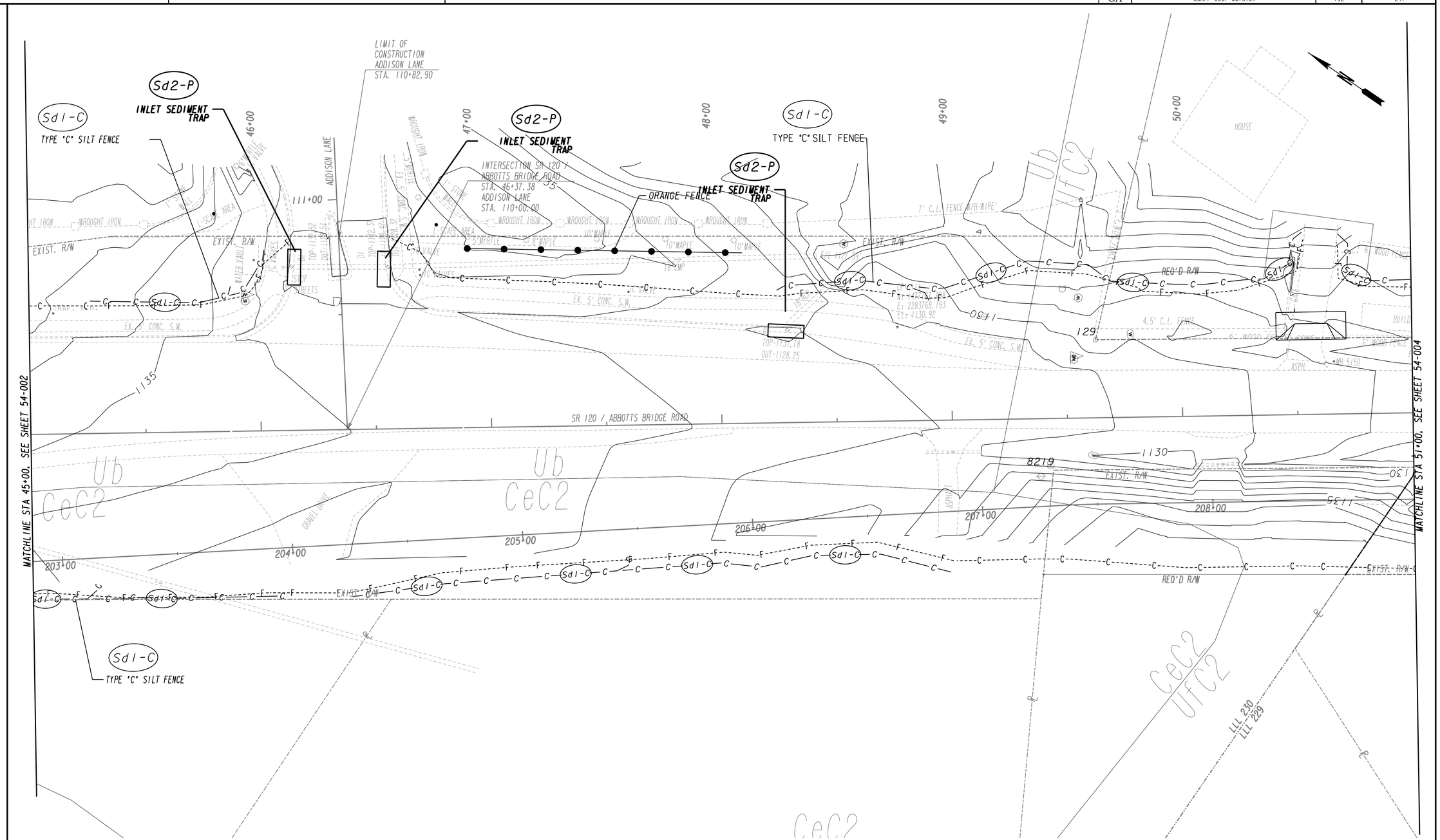
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-002

3/1/2007 GPLN



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SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 1

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-003

3/1/2007 GPLN

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USER:blmackenzie

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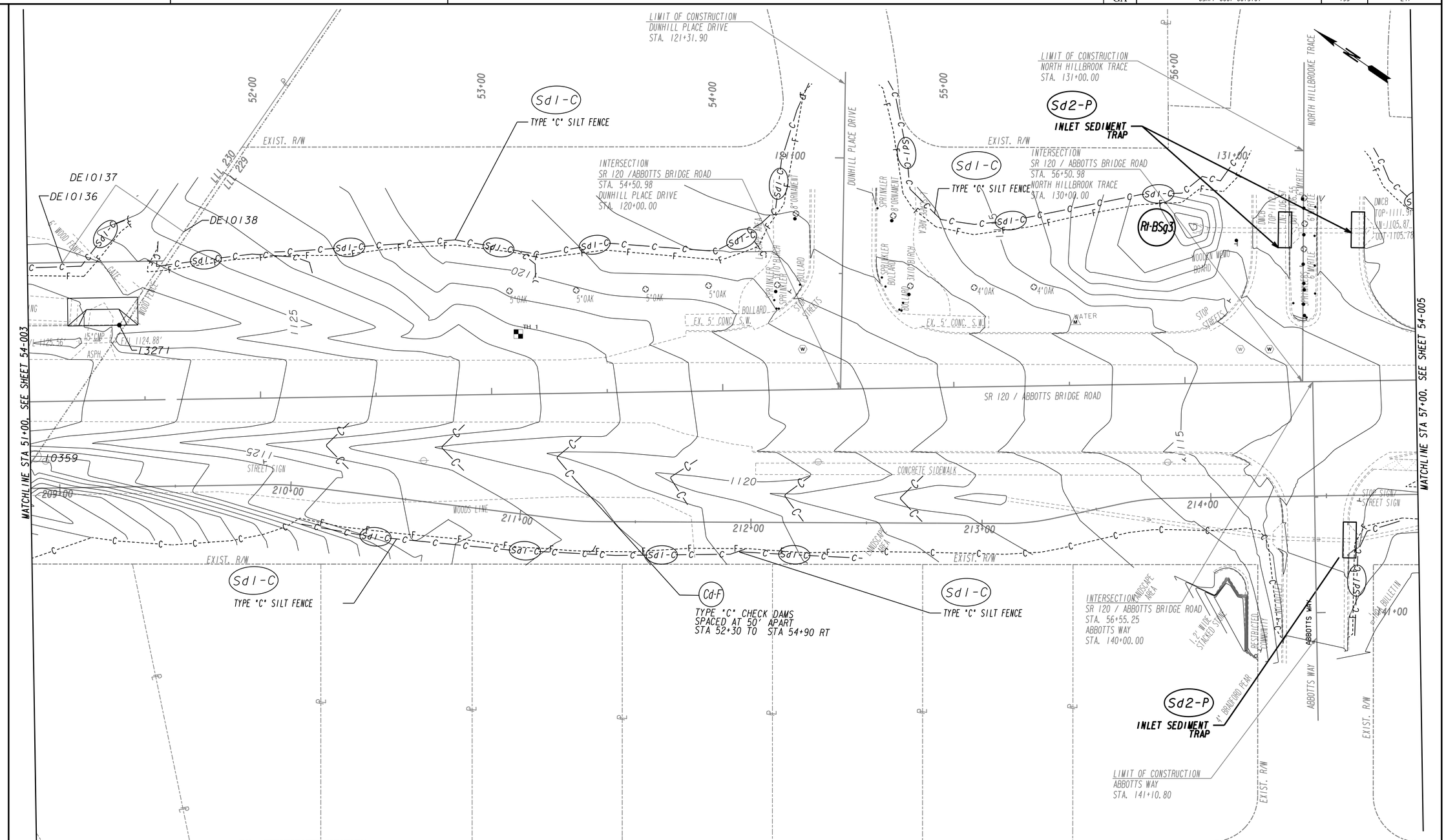
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	193	241



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SCALE IN FEET
0 20 40 80

REVISION DATES		

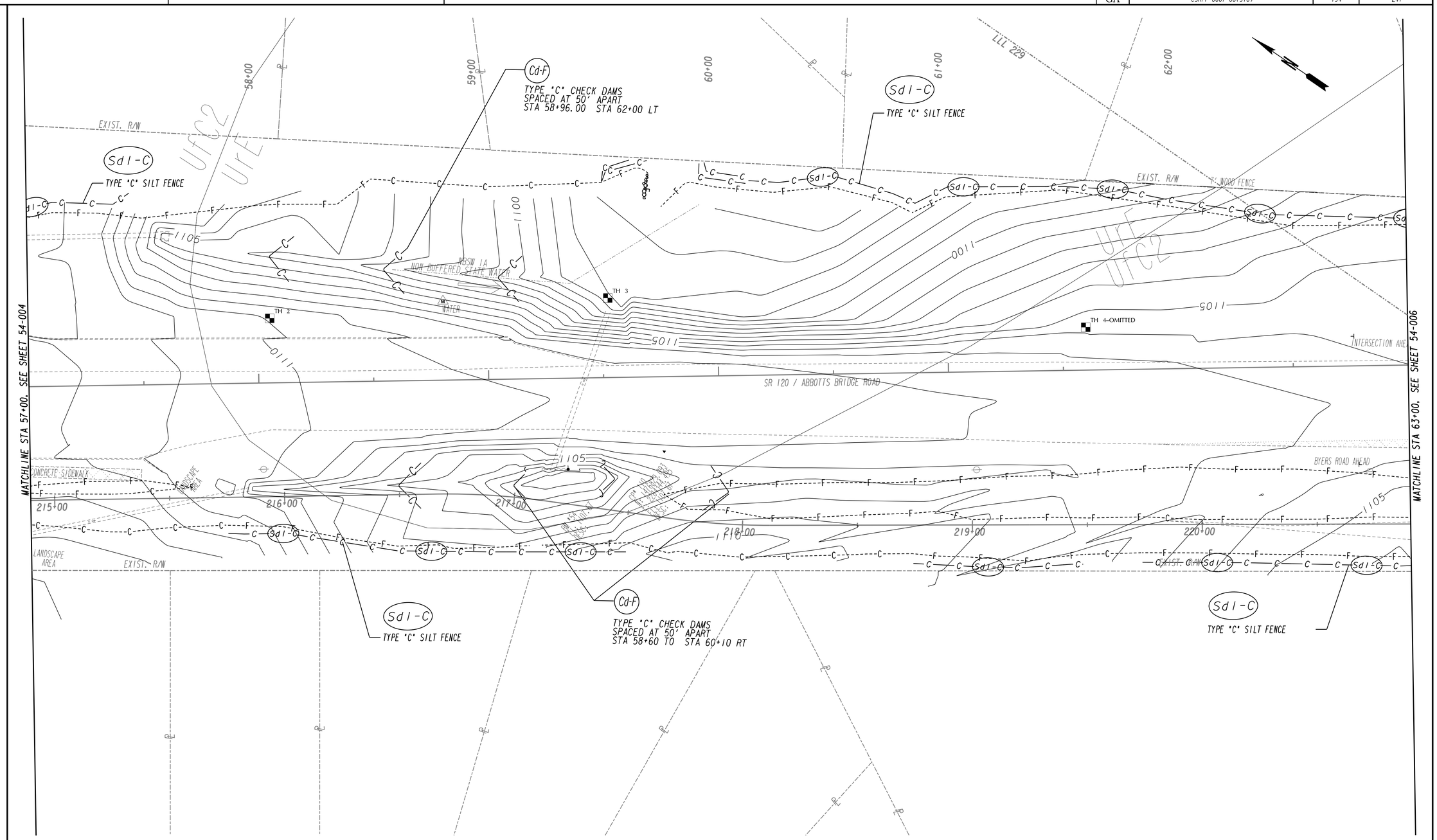
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-004

3/1/2007 GPLN



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SCALE IN FEET
0 20 40 80

REVISION DATES		

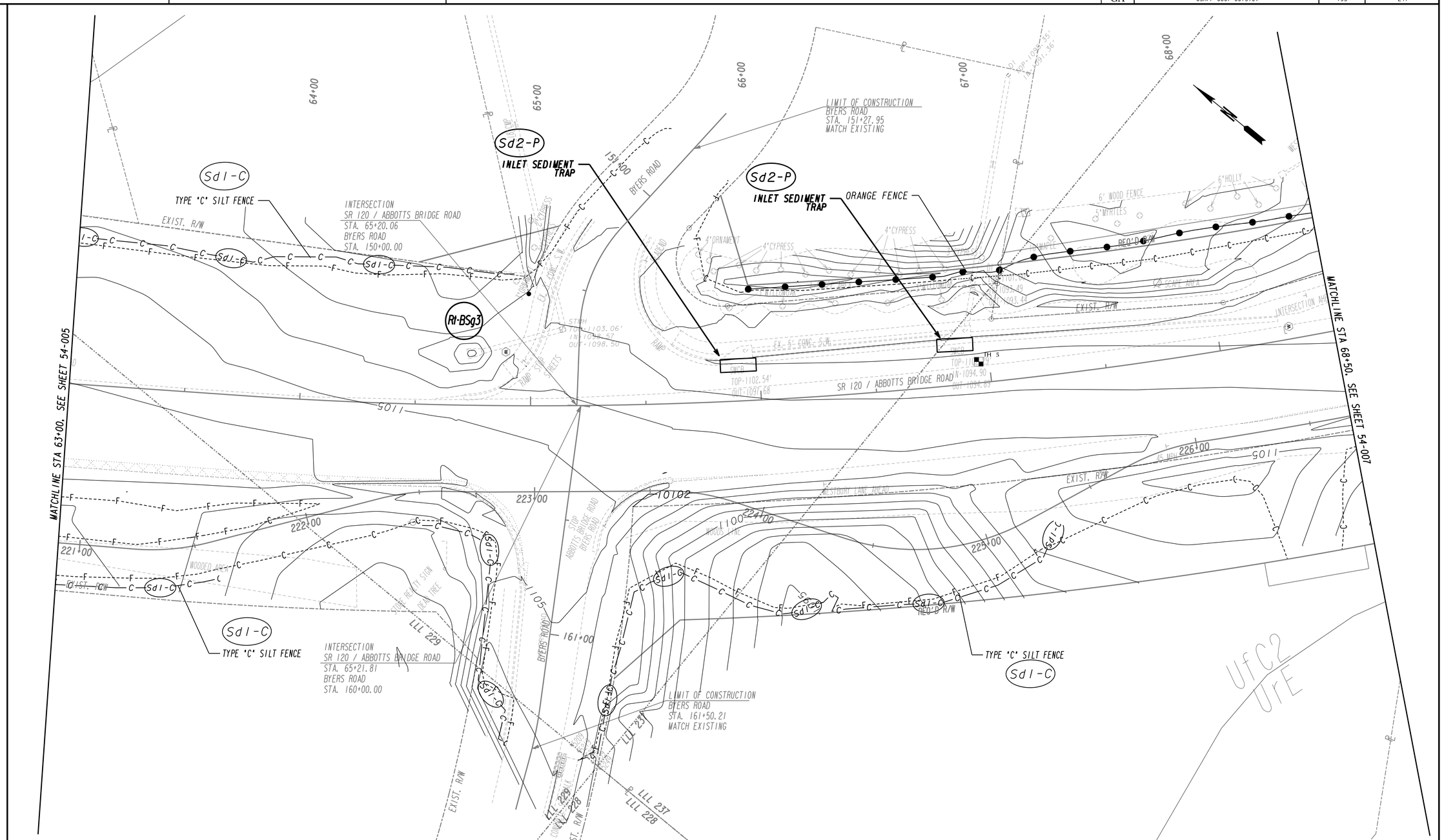
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-005

3/1/2007 GPLN



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SCALE IN FEET
0 20 40 80

REVISION DATES		

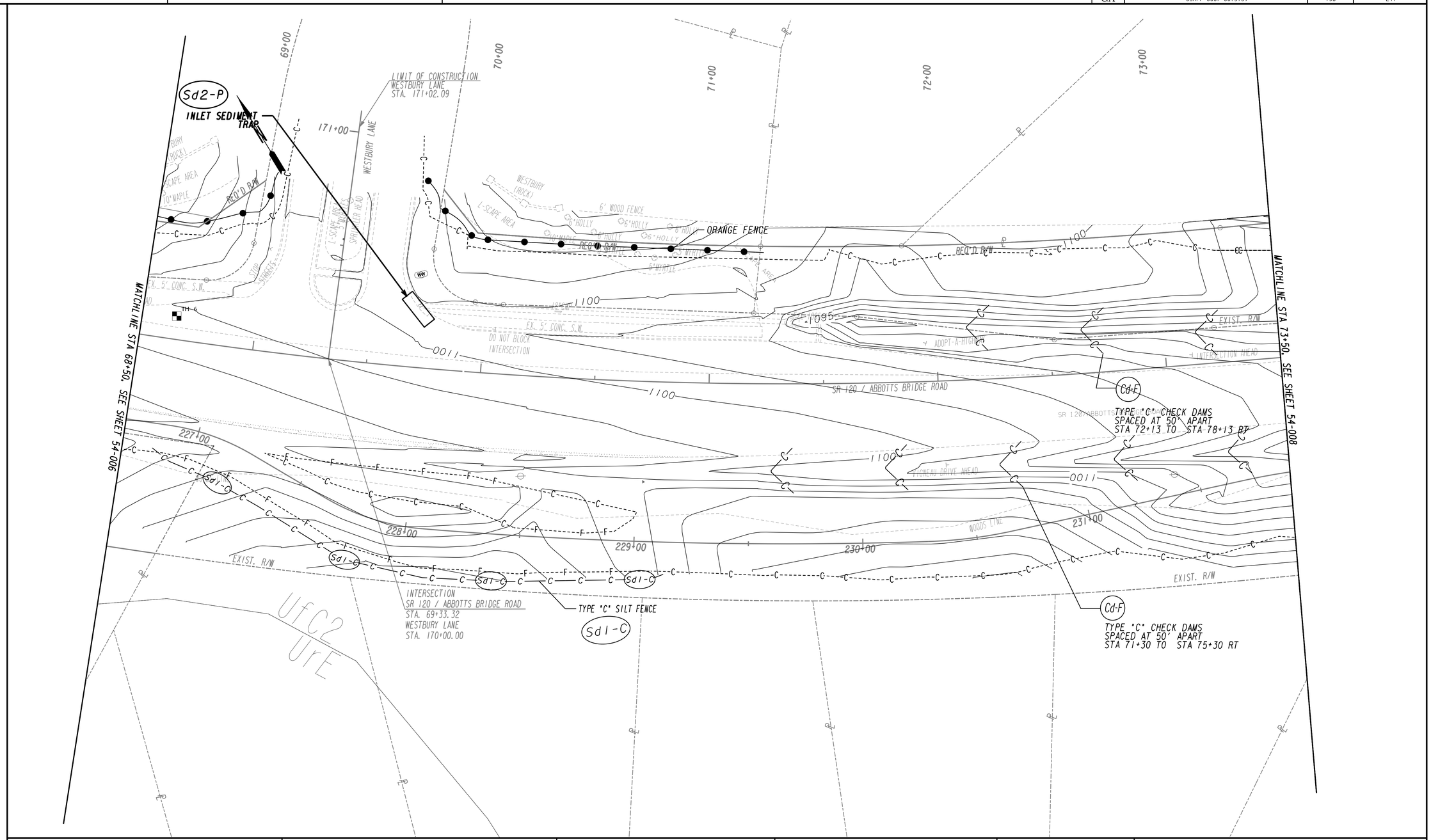
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-006

3/1/2007 GPLN



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GSWCC LEVEL II CERT. #8162

Johns Creek

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SCALE IN FEET
0 20 40 80

REVISION DATES		

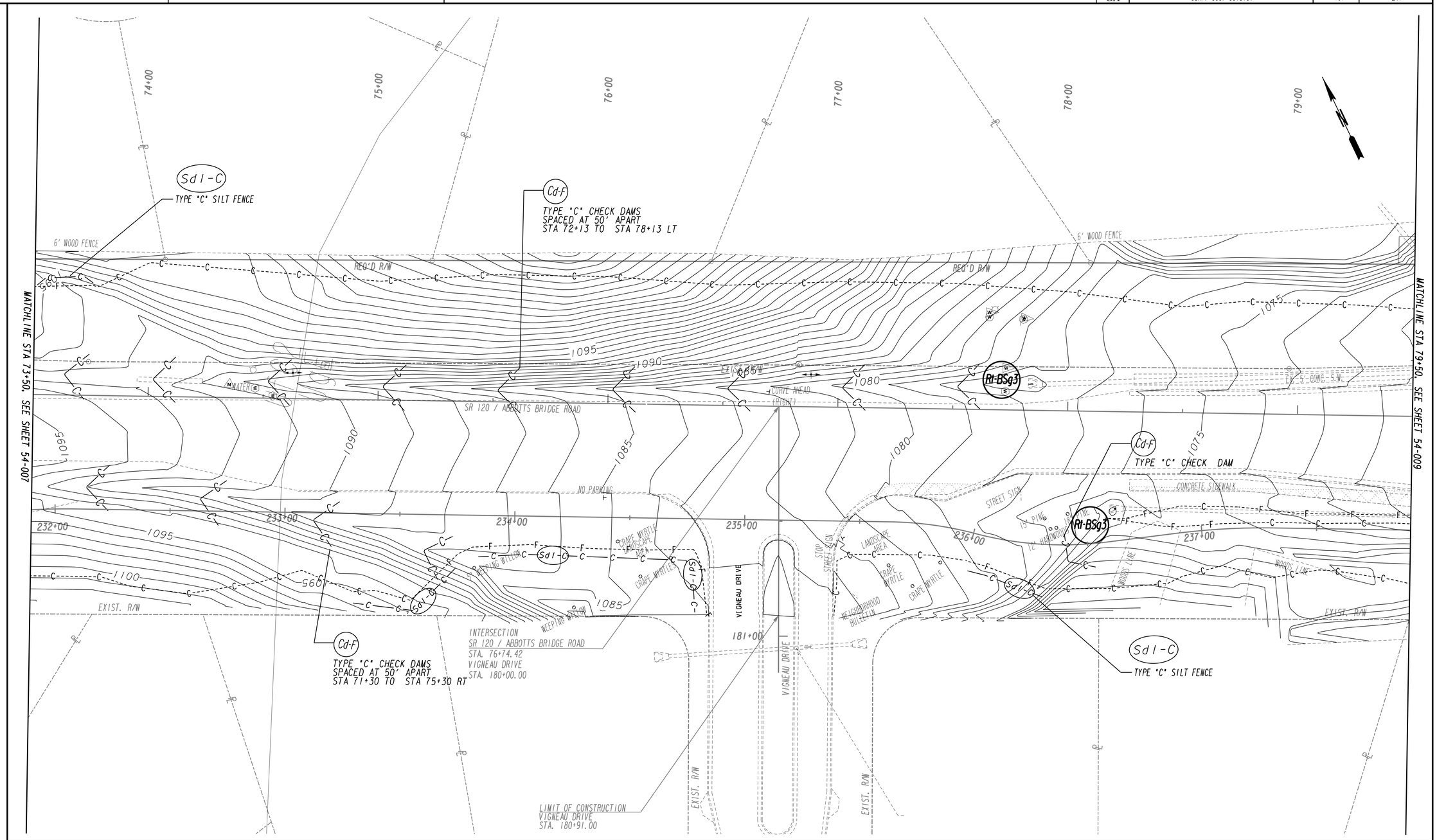
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING NO.
54-007

3/1/2007 GPLN



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GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

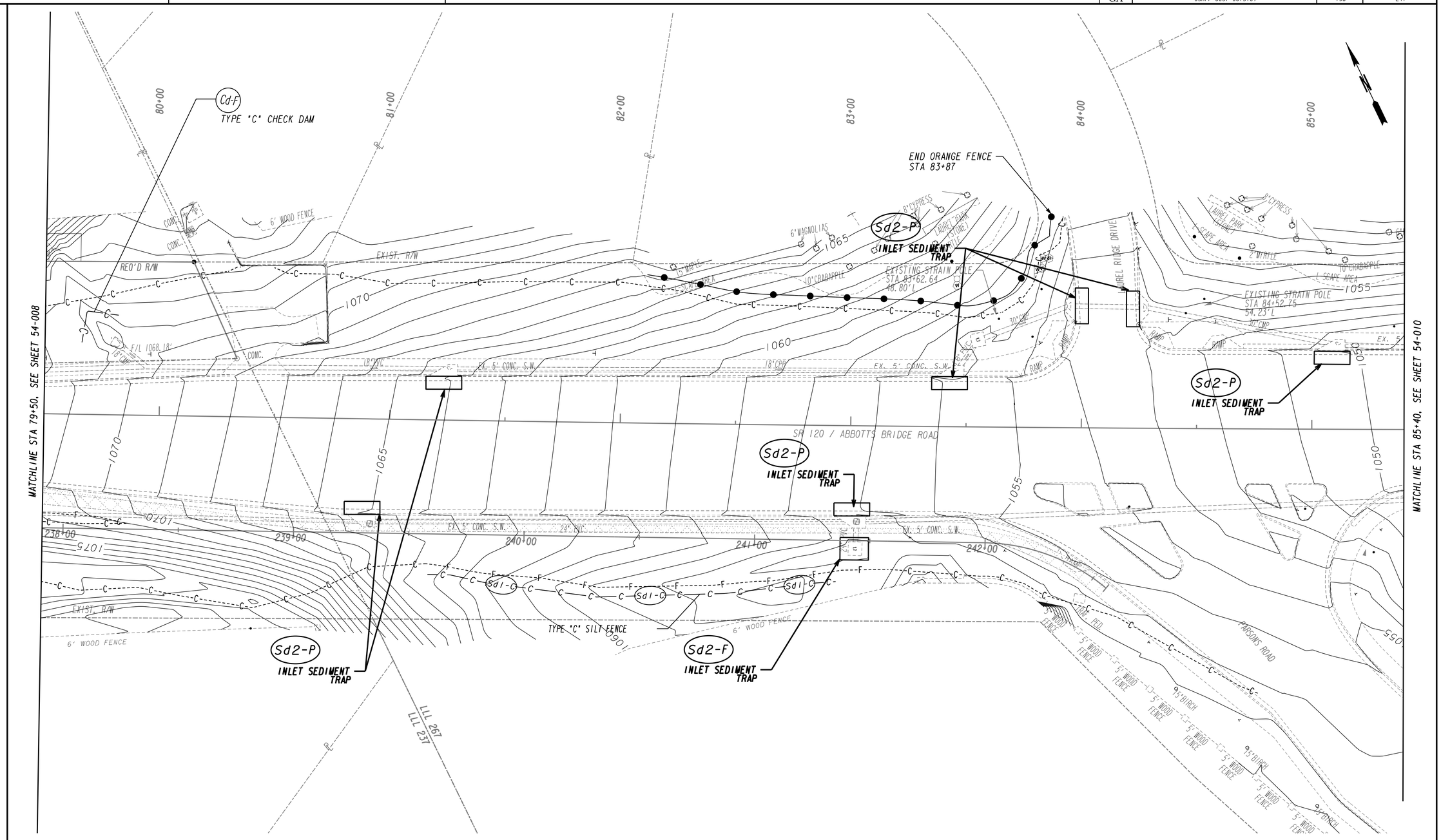
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-008

3/1/2007 GPLN



Mitchell Greenway

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Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

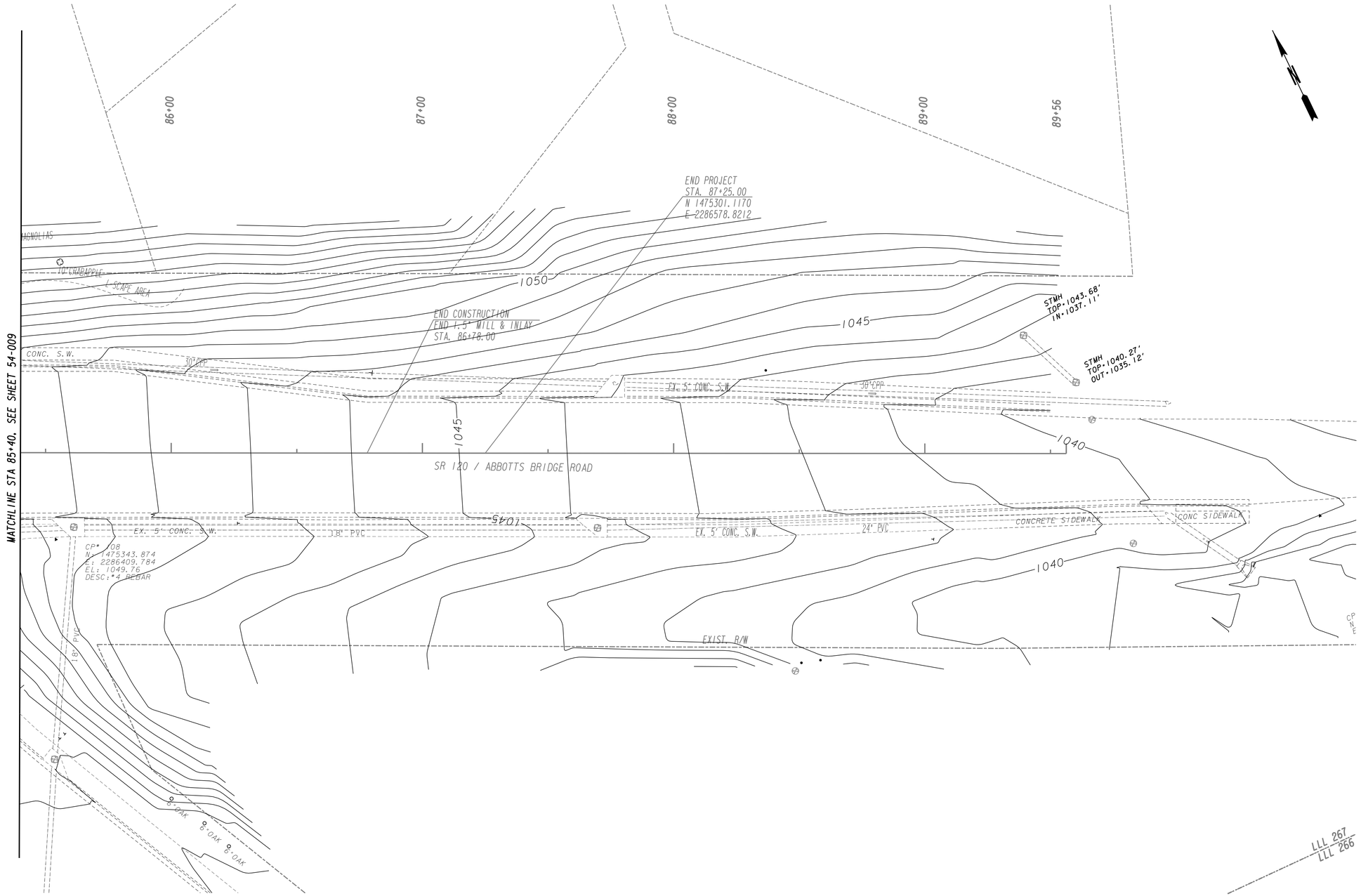
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-009

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

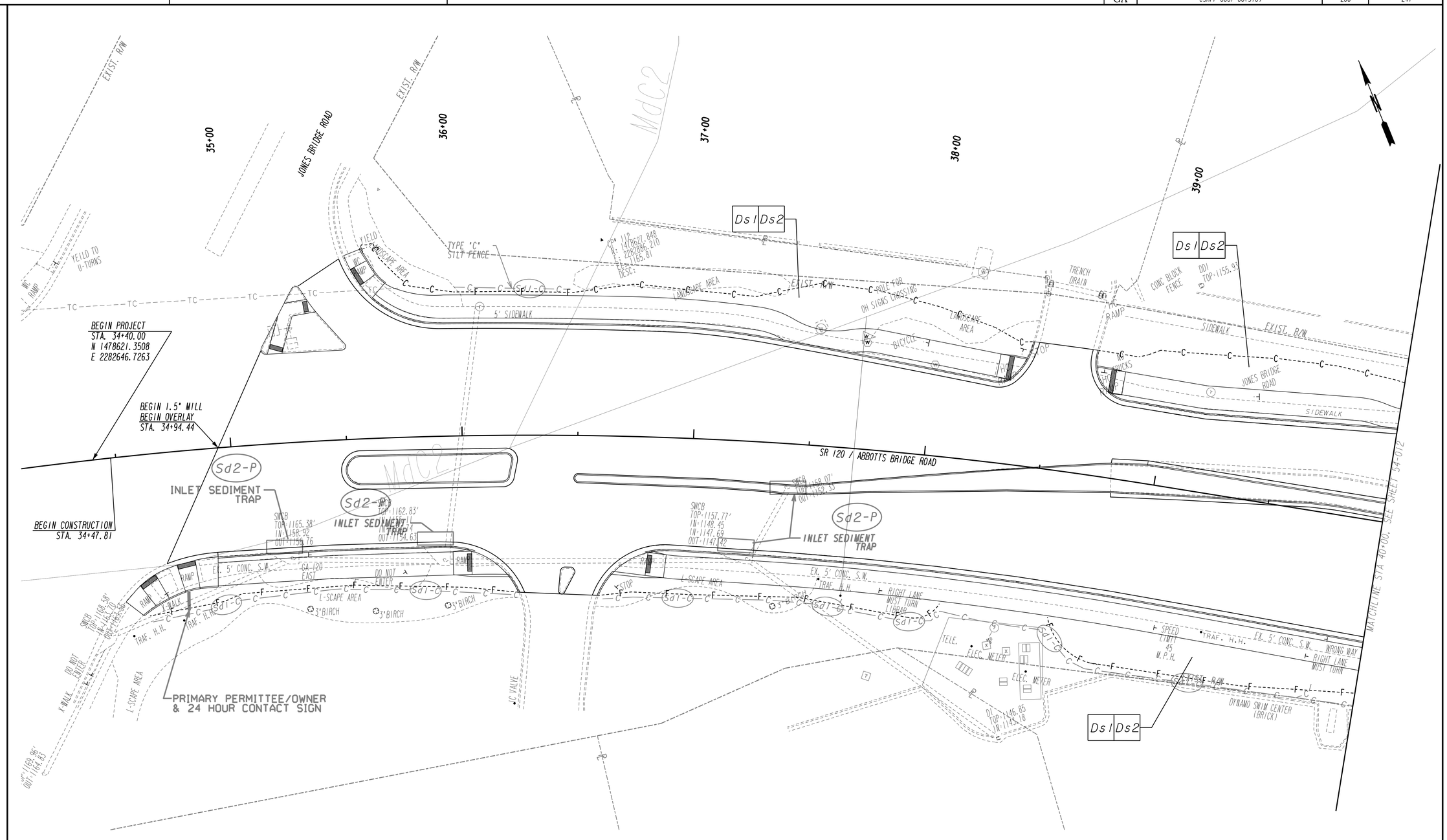
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE I

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-010

3/1/2007 GPLN



Mitchell Greenway

MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

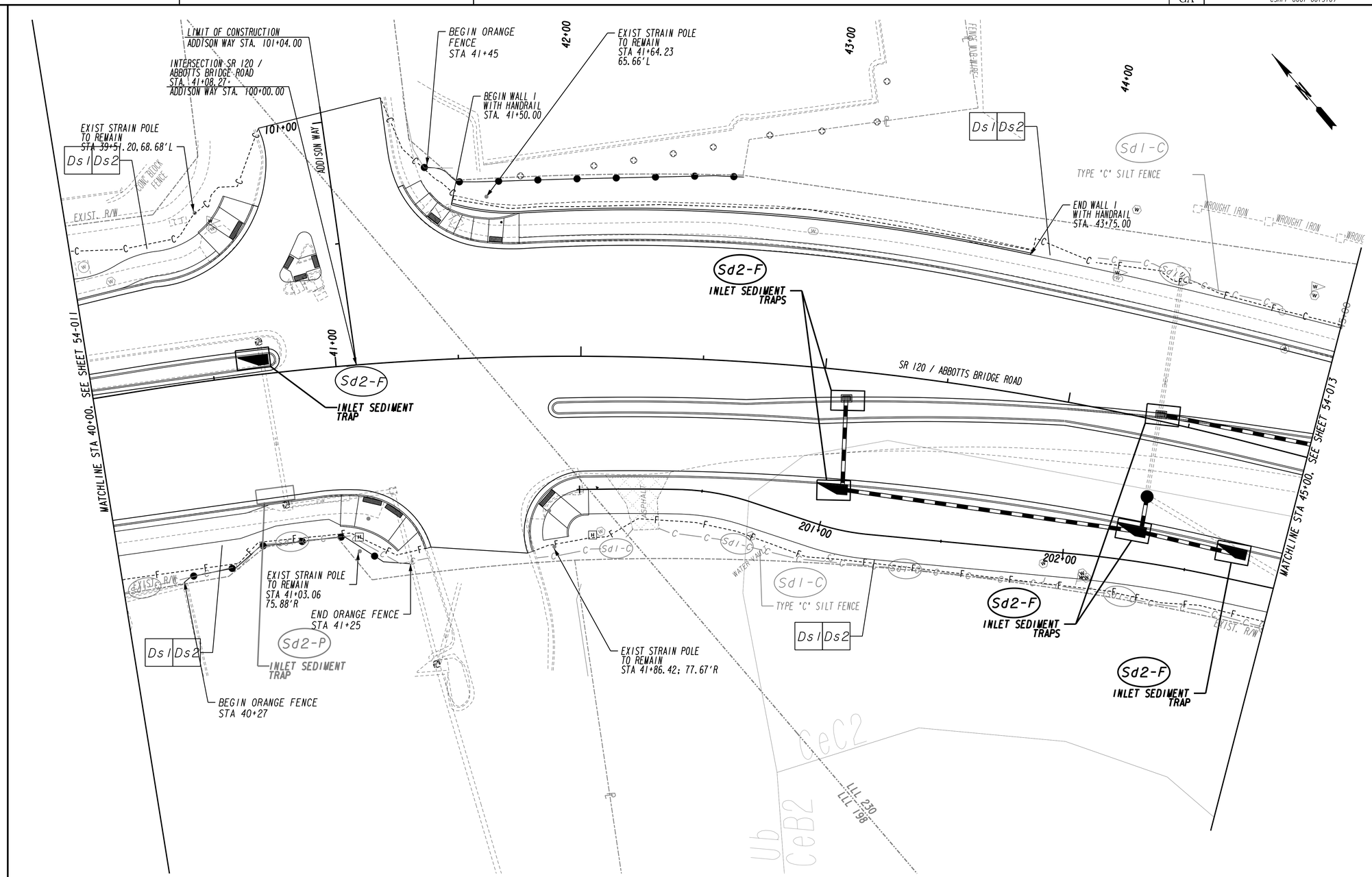
BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-011

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	201	241



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

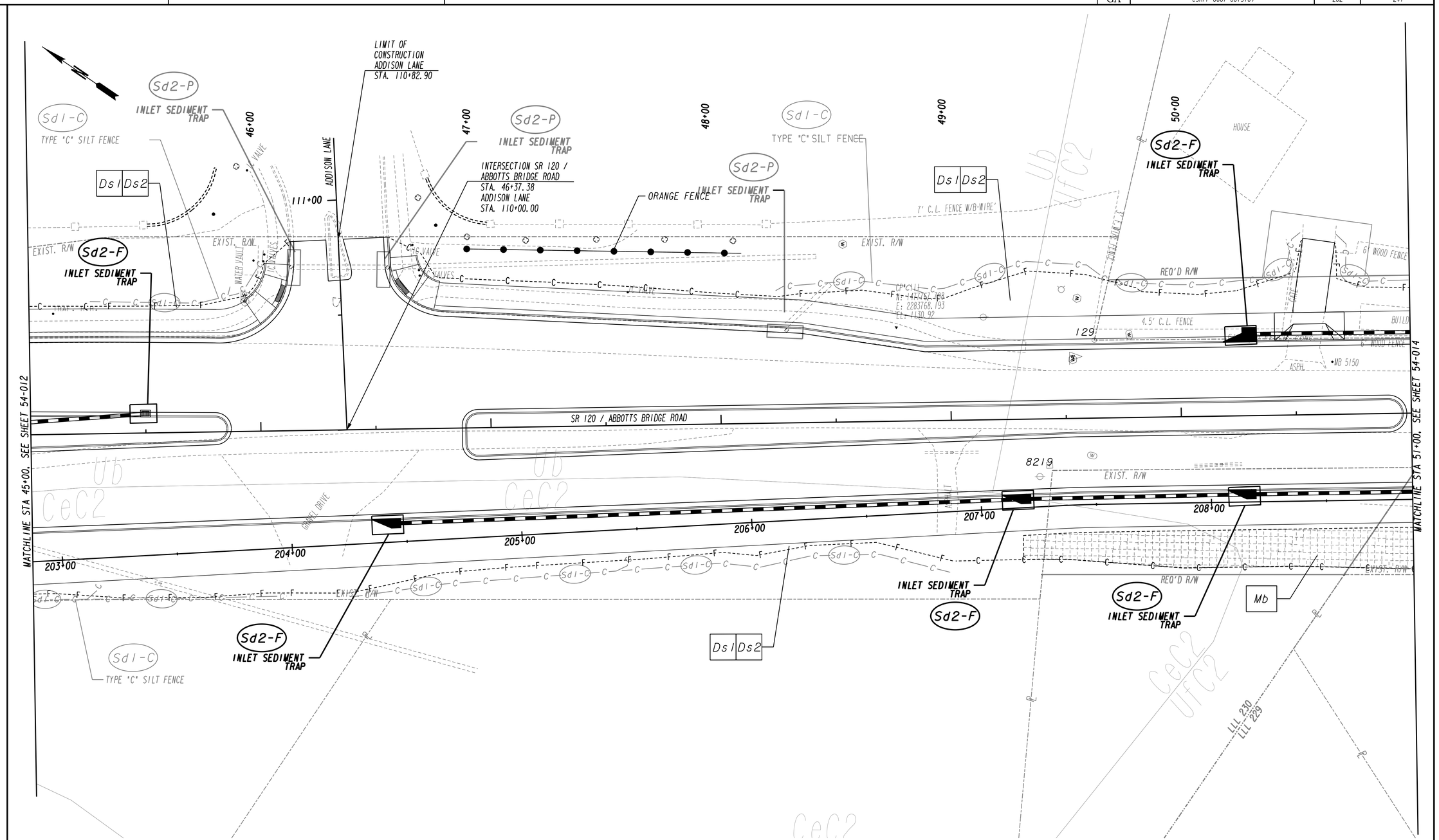
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-012

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

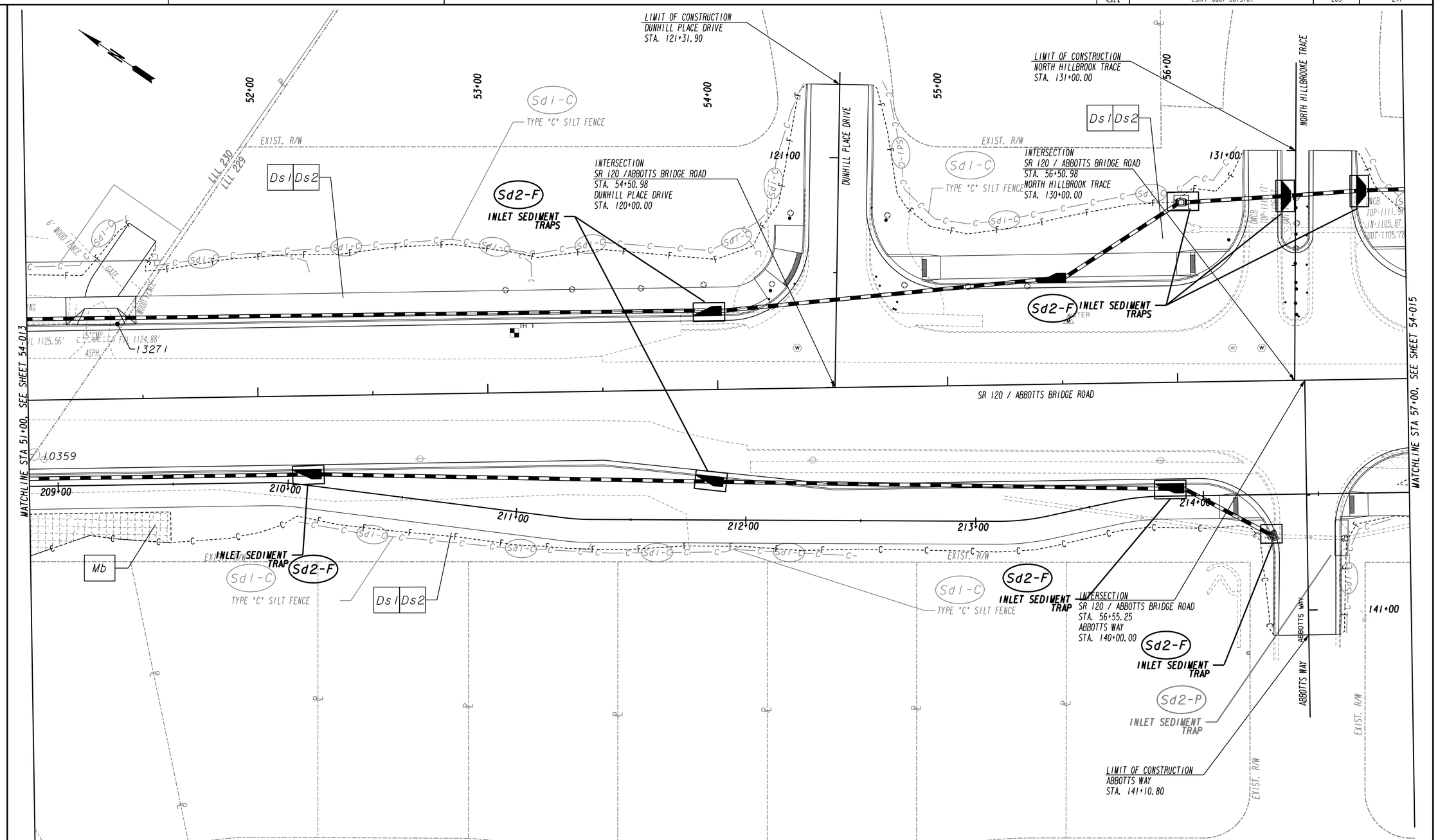
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 54-013

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

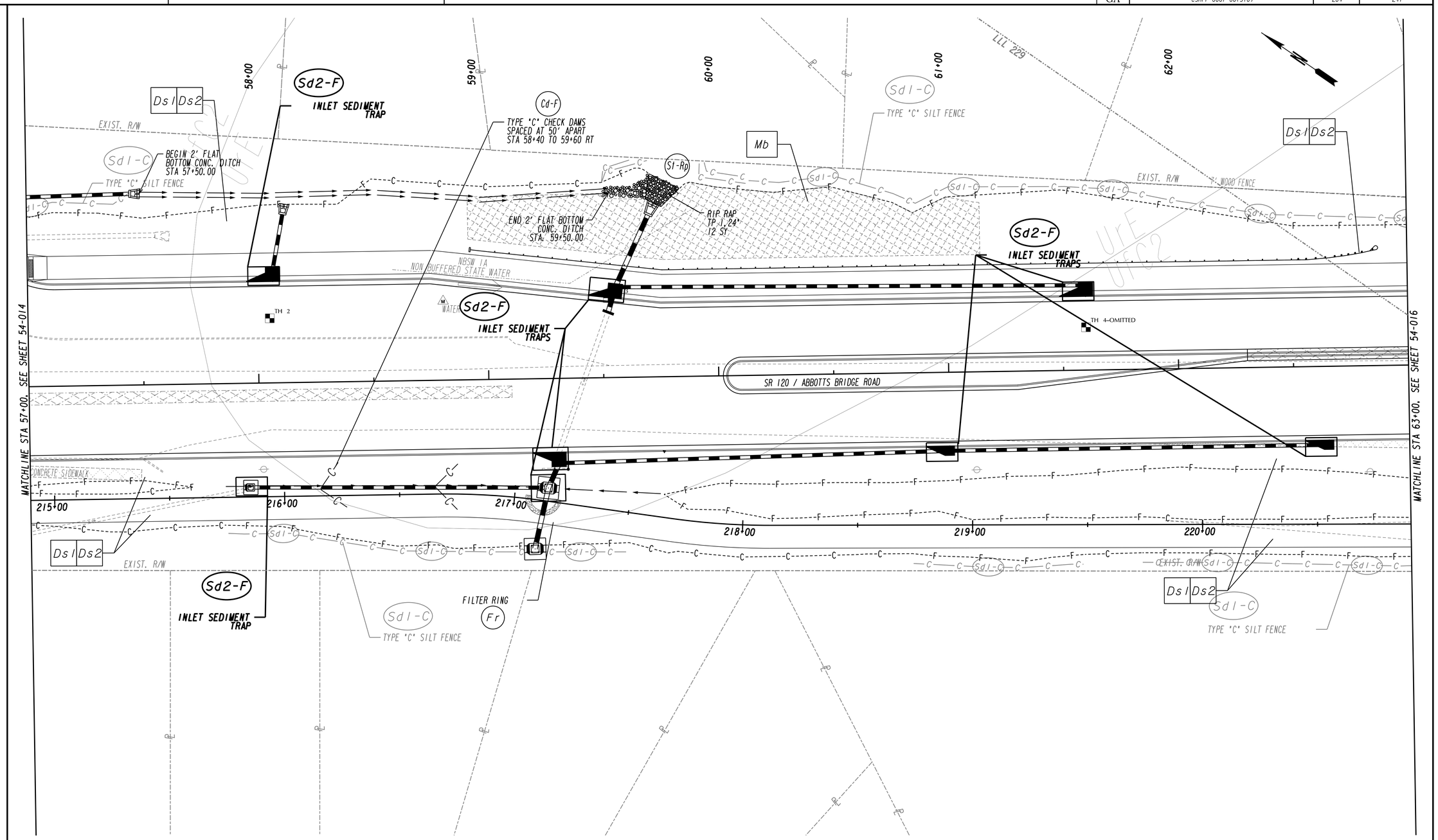
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-014

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

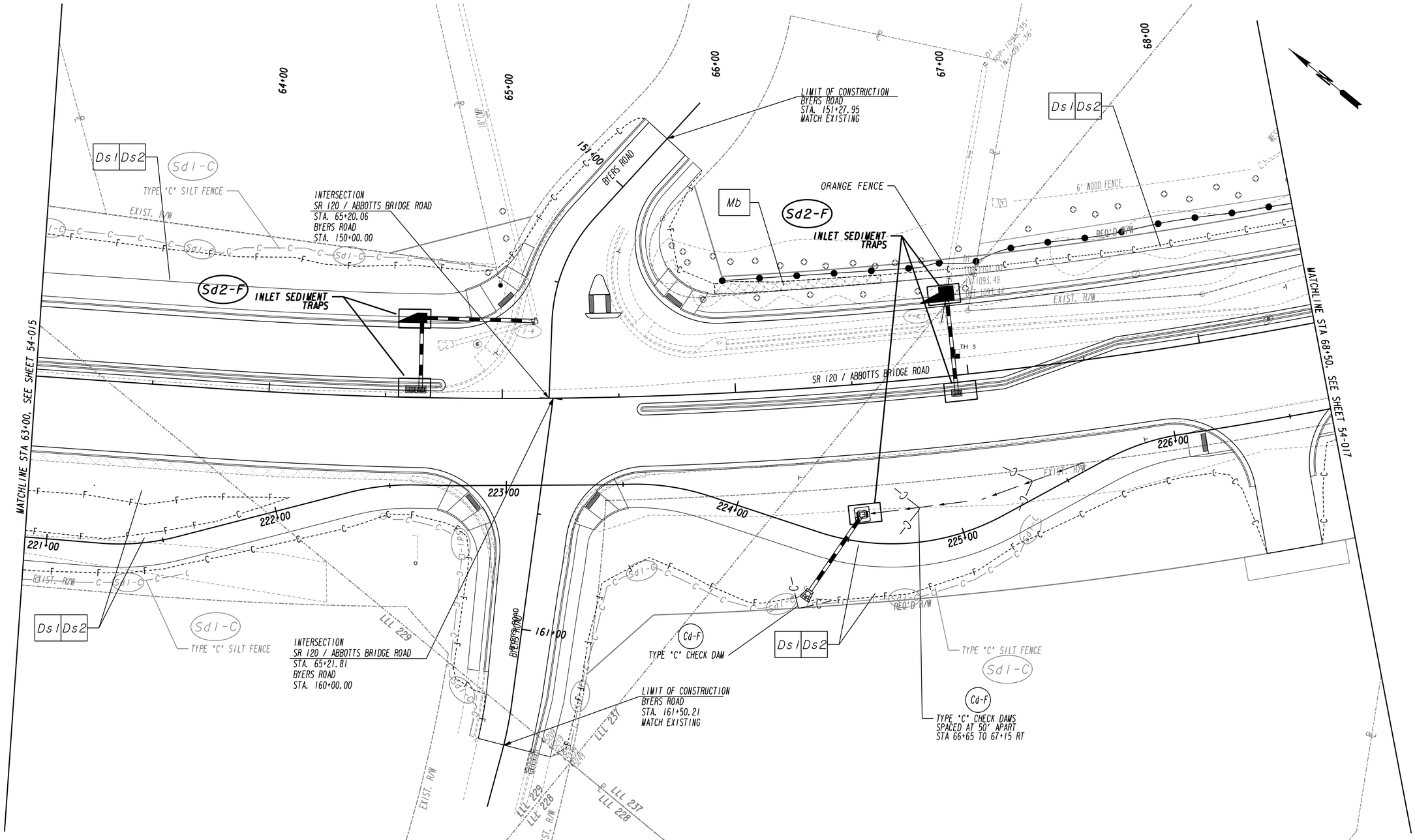
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-015

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

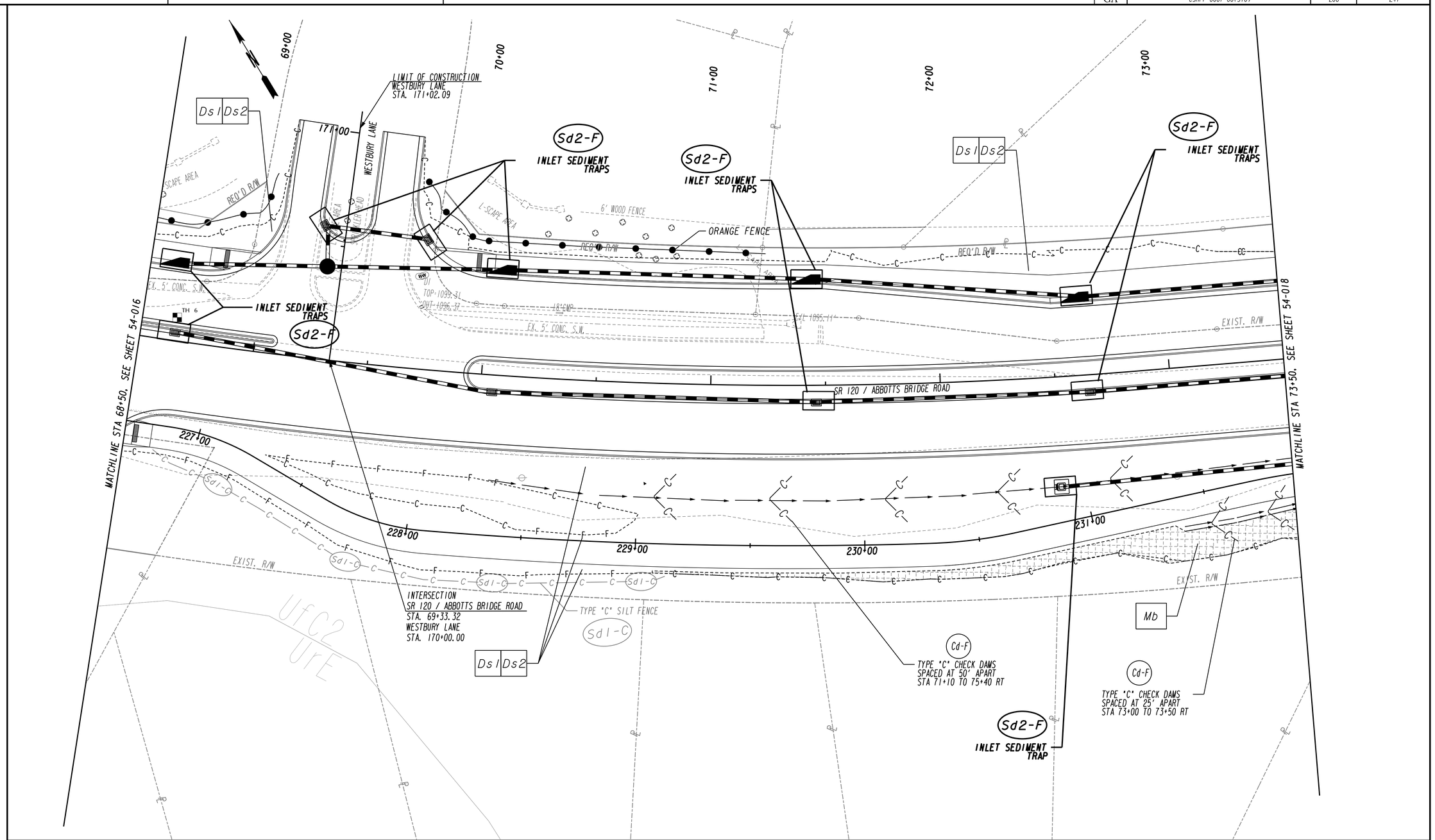
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-016

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

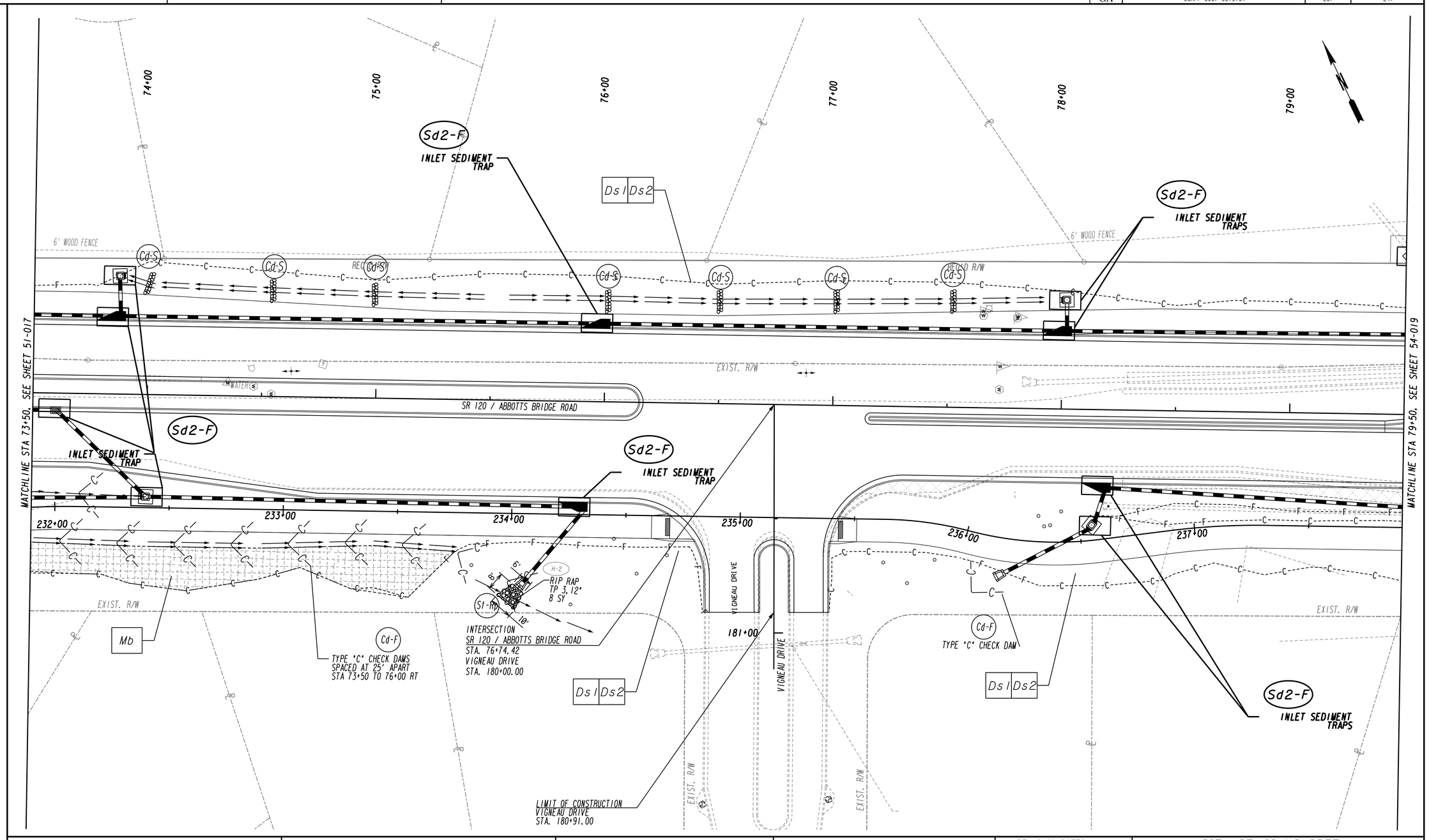
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-017

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

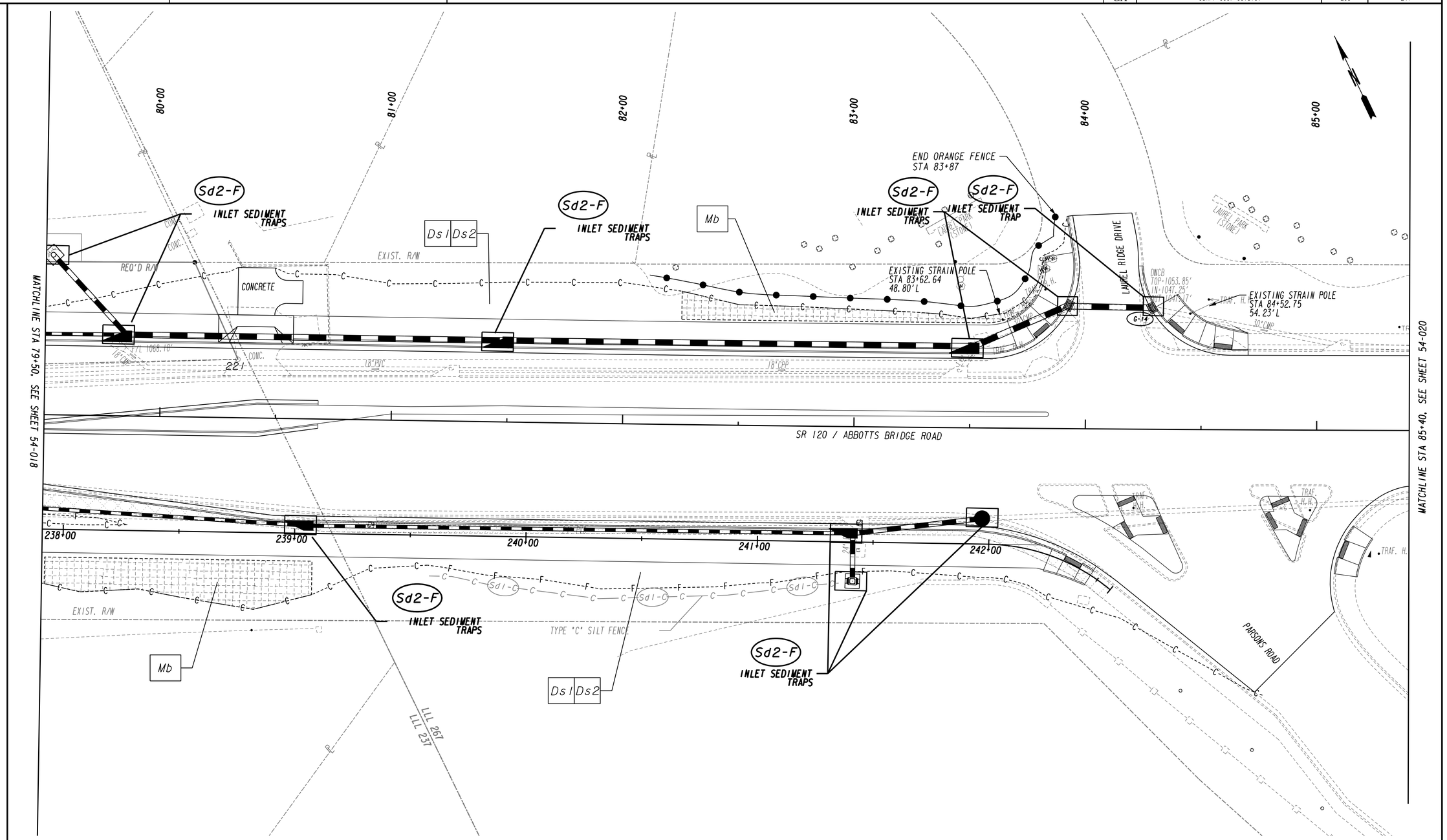
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 54-018

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

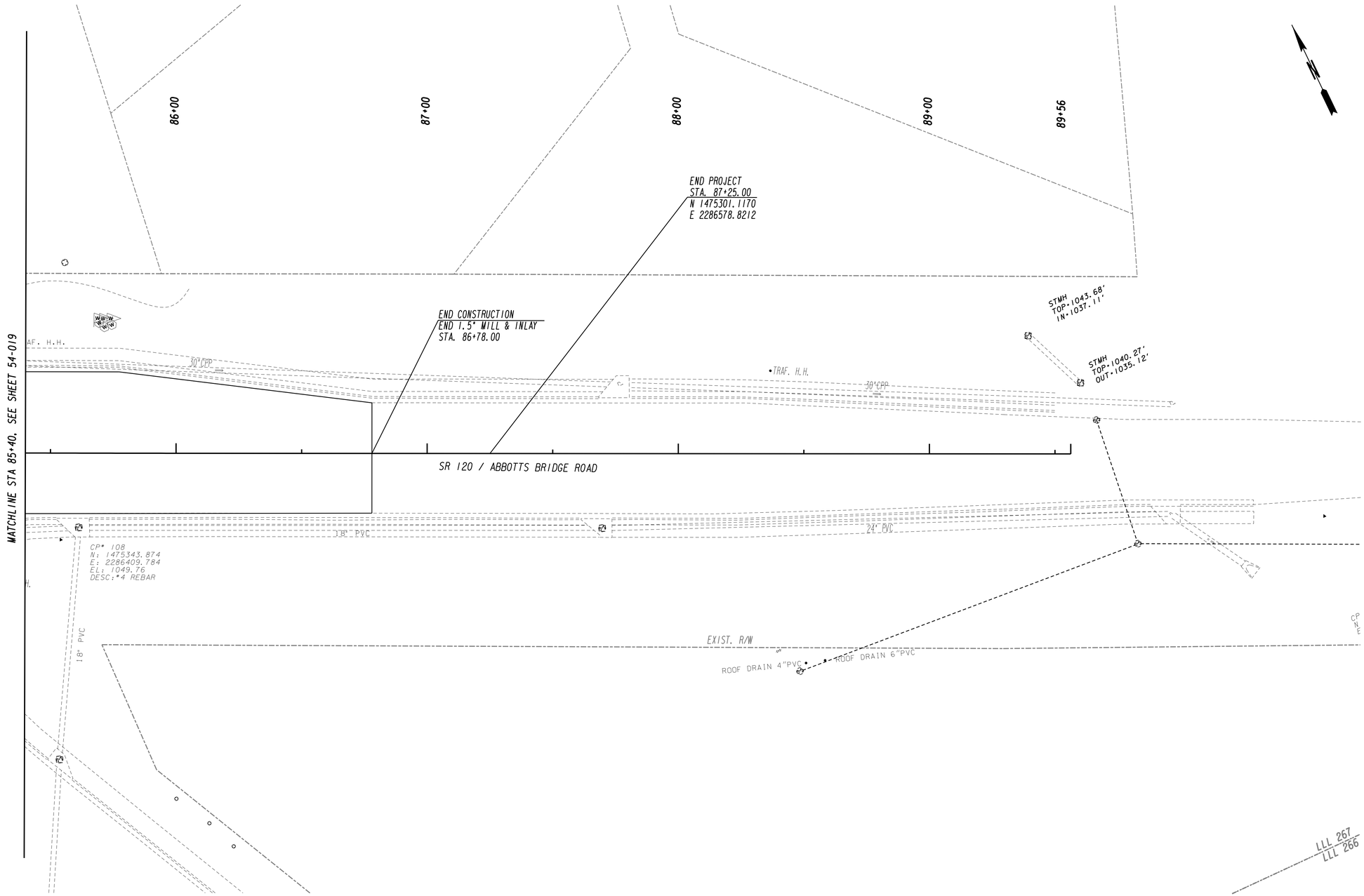
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-019

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

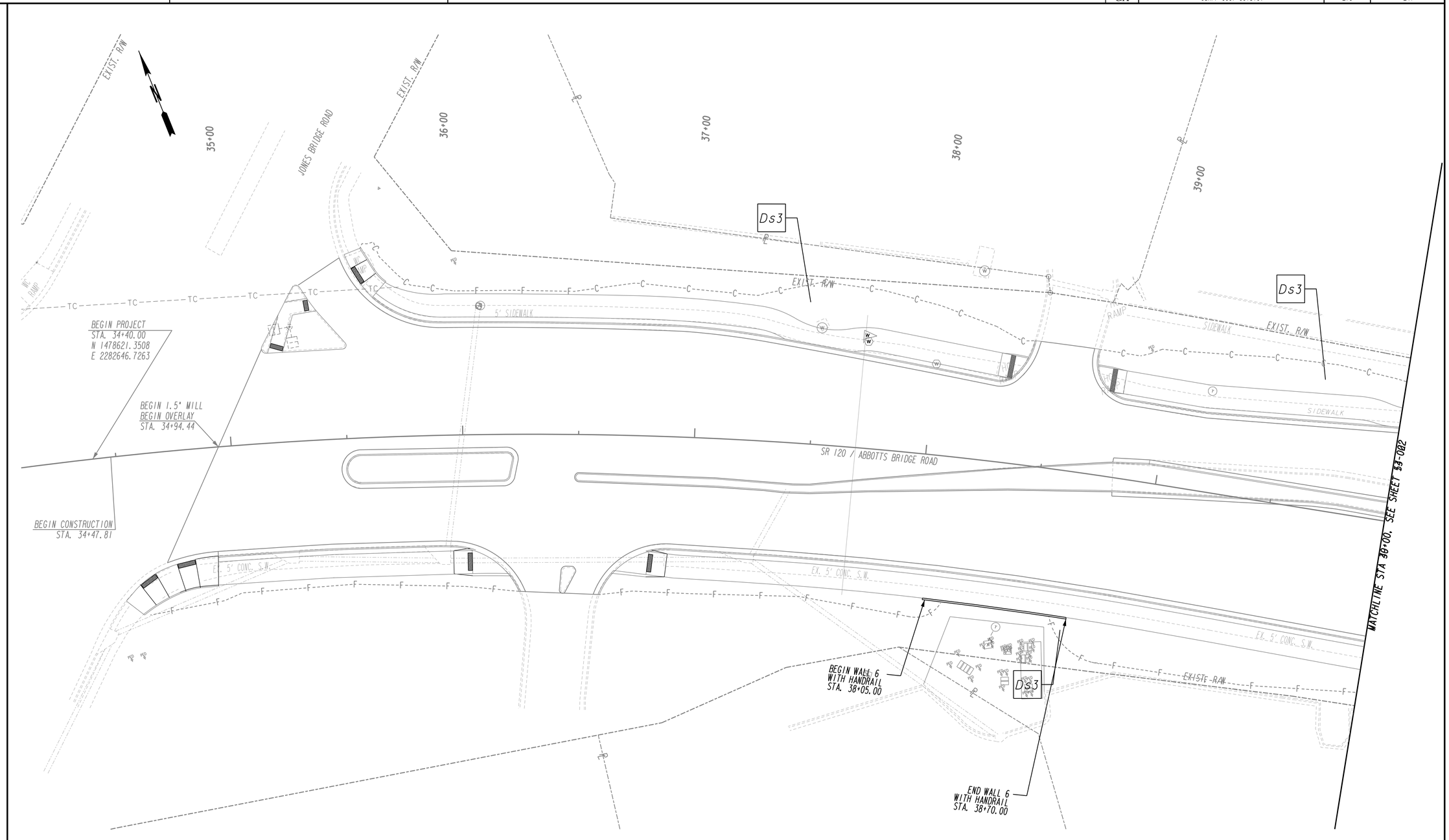
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 2

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-020

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

CITY OF JOHNS CREEK
PUBLIC WORKS

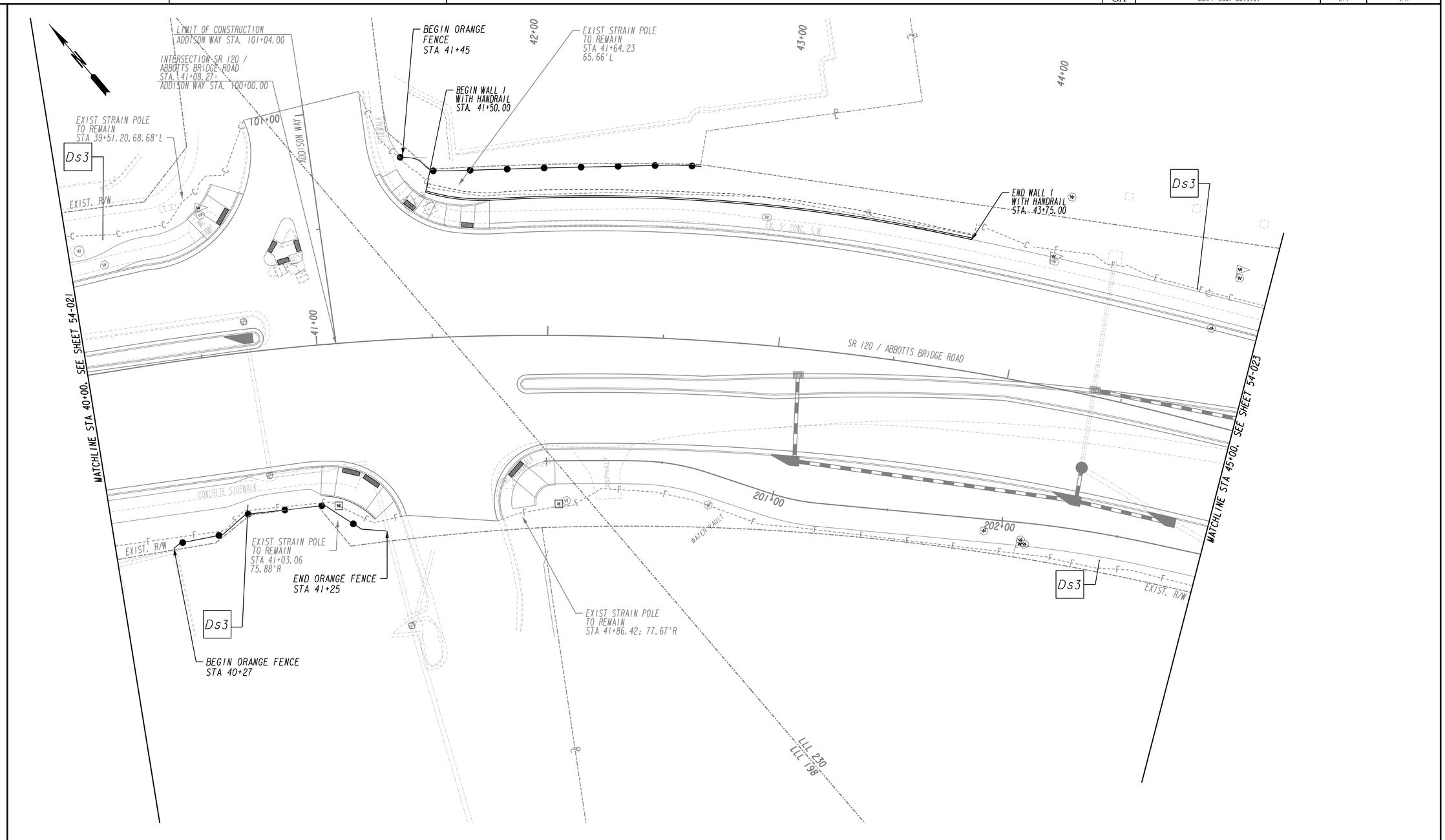
BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-021

3/1/2007 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	CSHPP-0007-00(310)	211	241



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

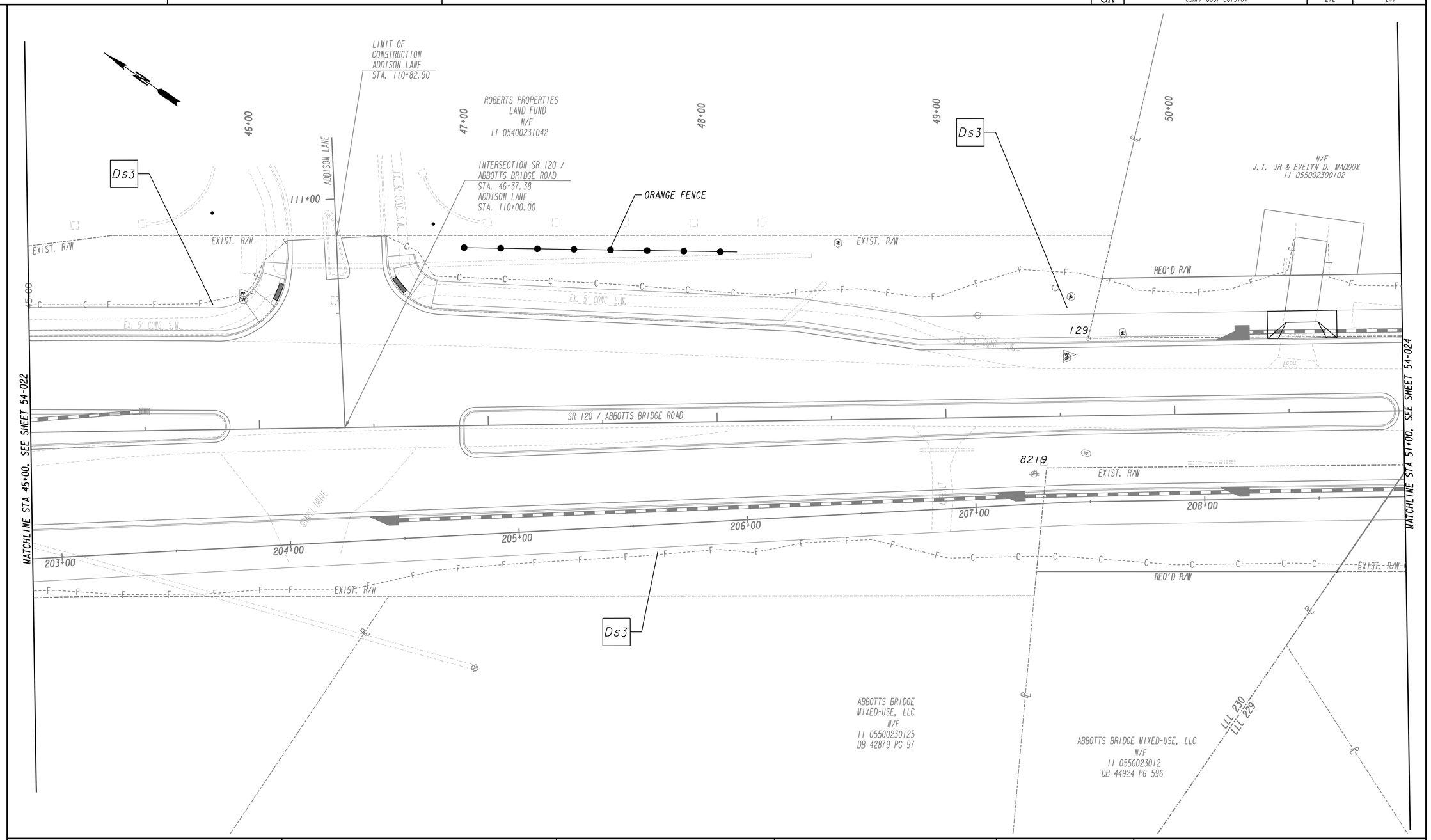
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-022

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES

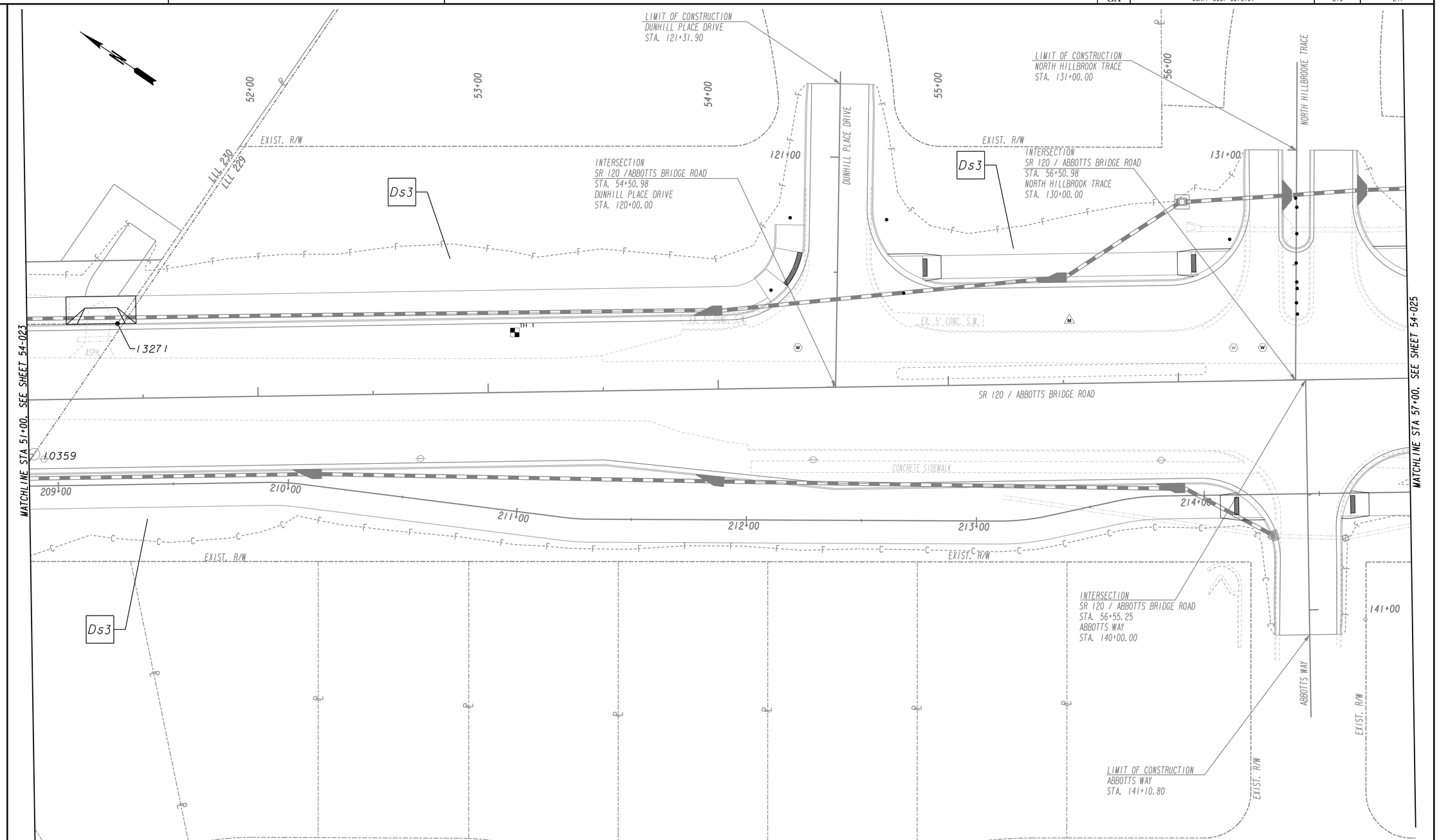
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-023

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

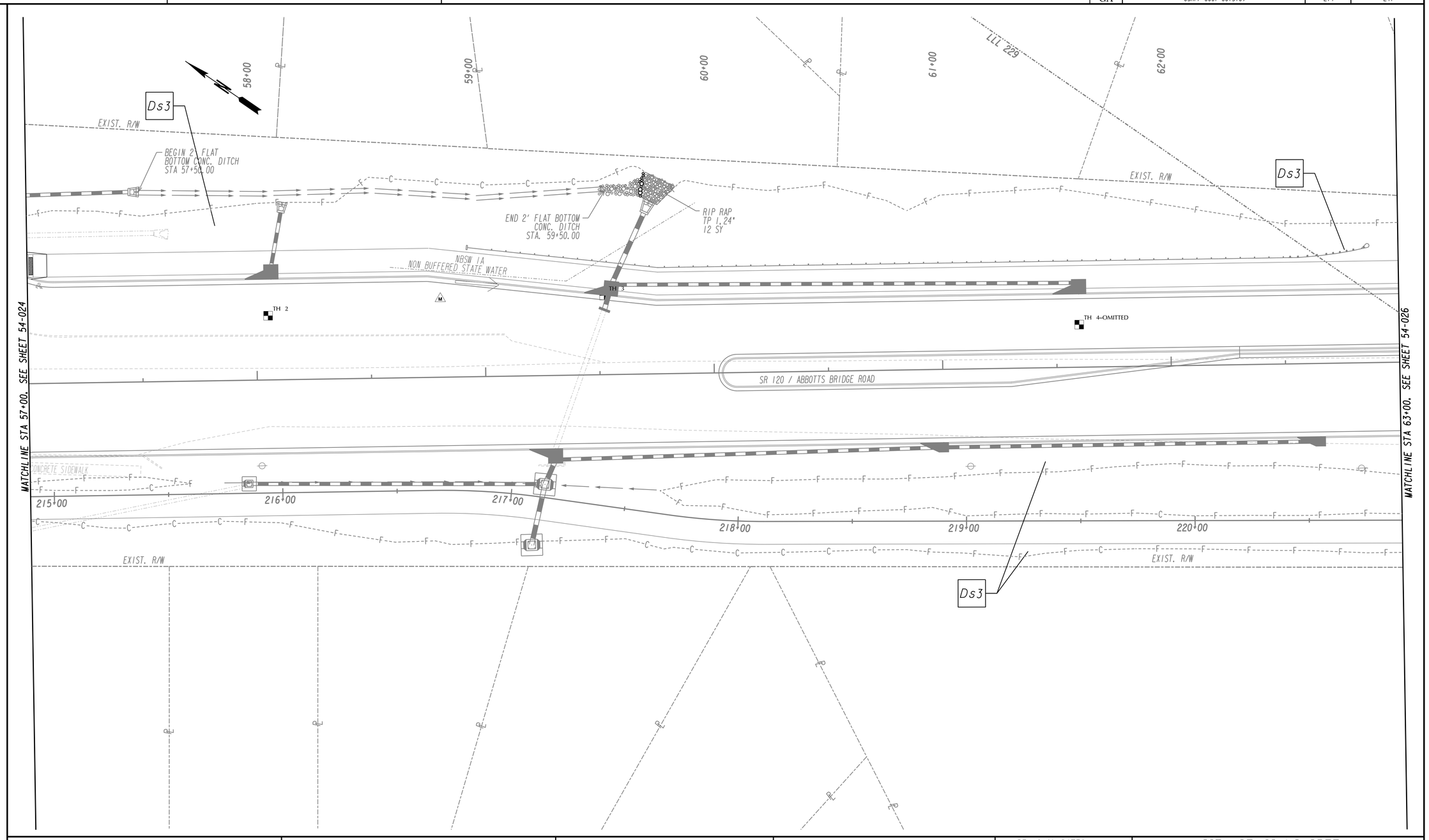
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-024

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

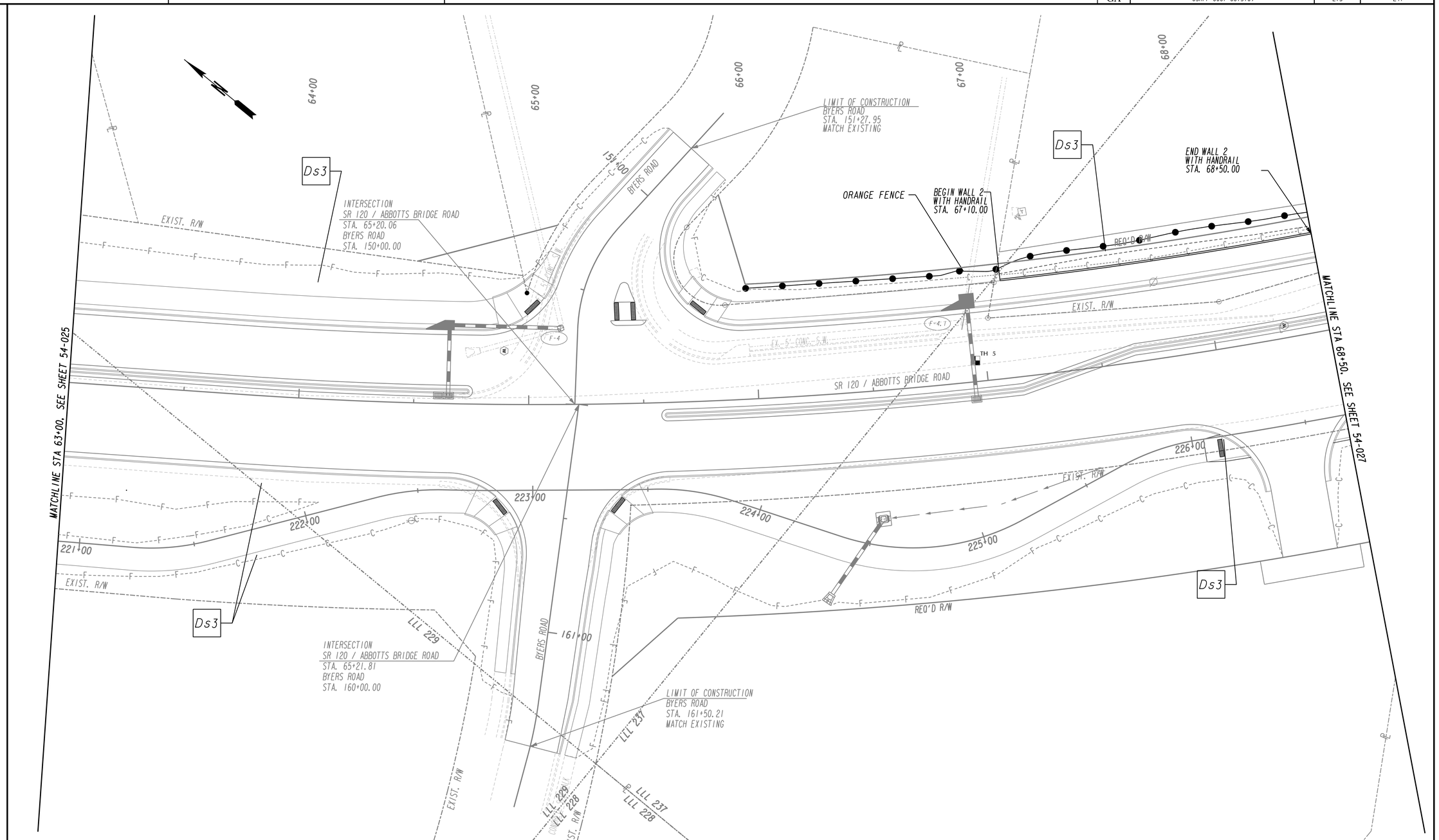
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No. 54-025

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

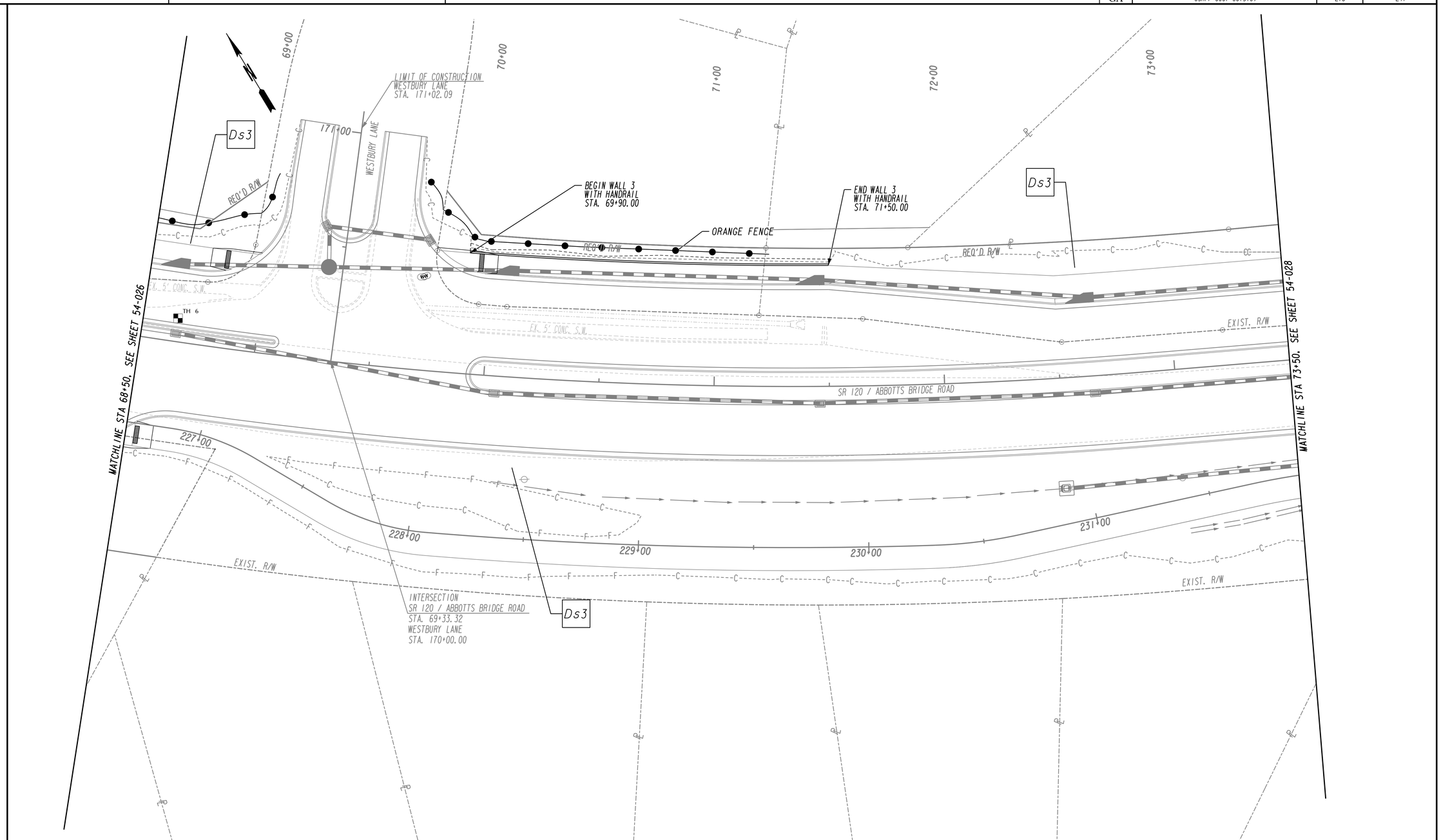
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-026

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

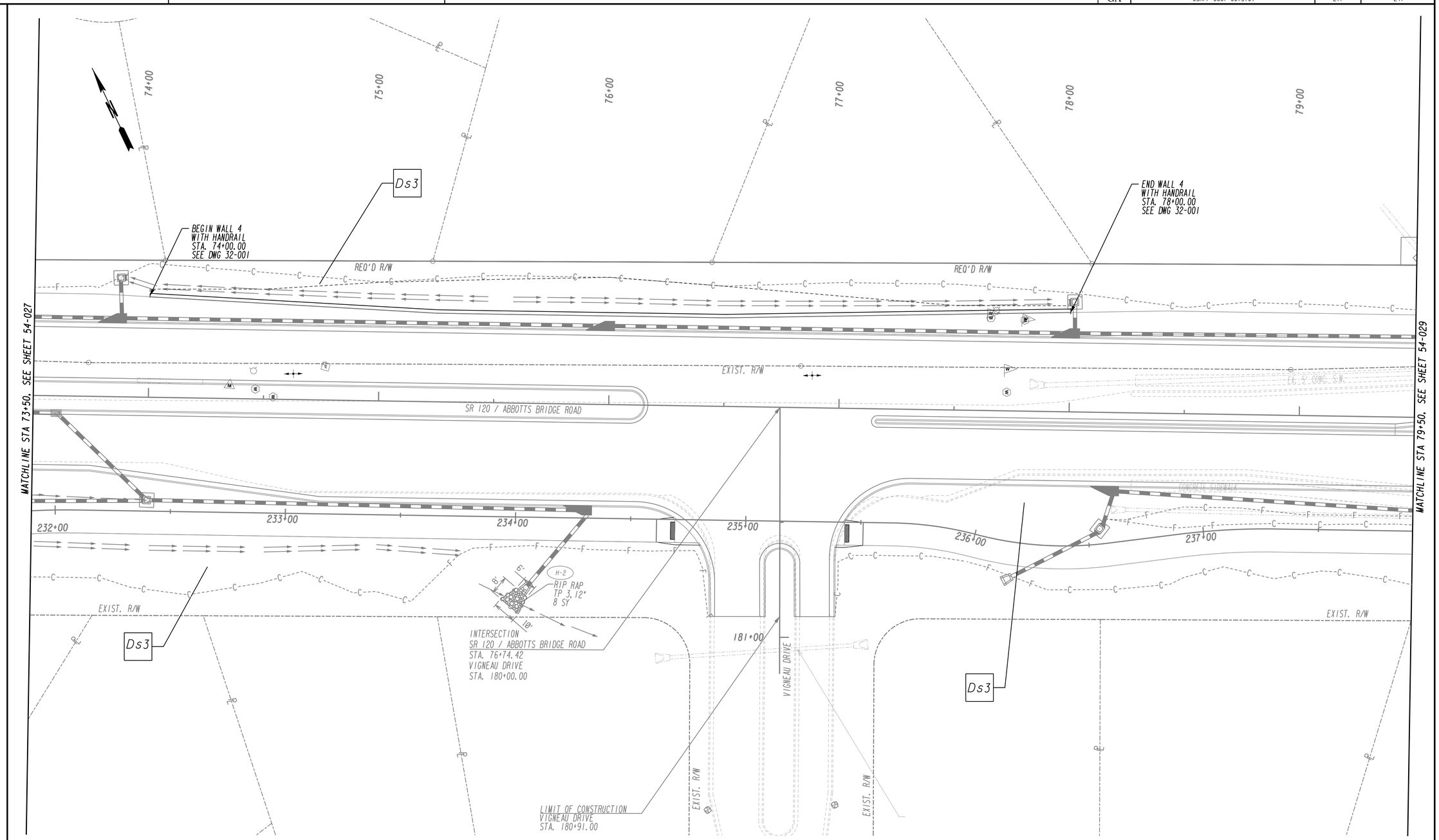
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-027

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

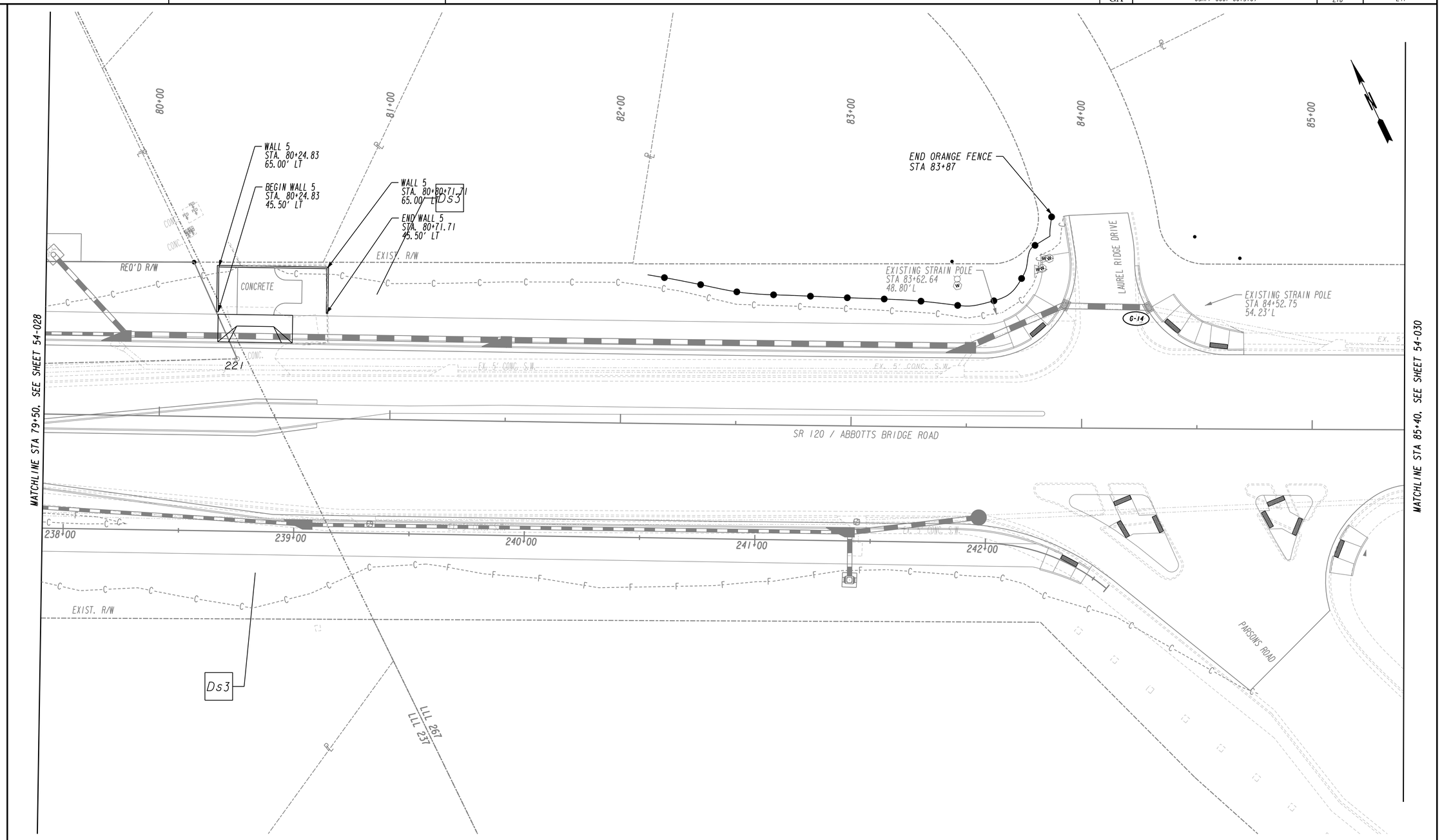
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-028

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

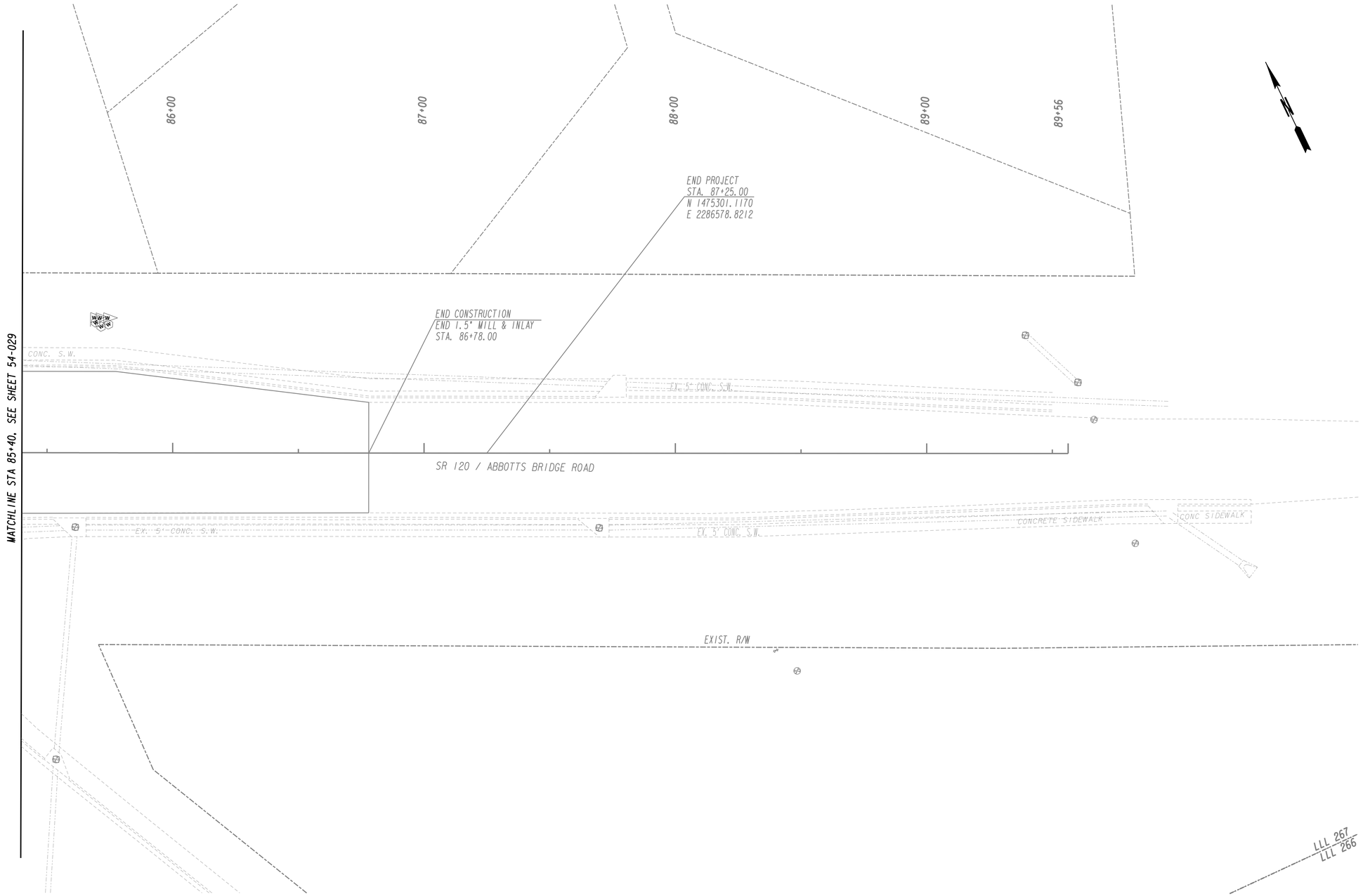
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-029

3/1/2007 GPLN



MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 20 40 80

REVISION DATES		

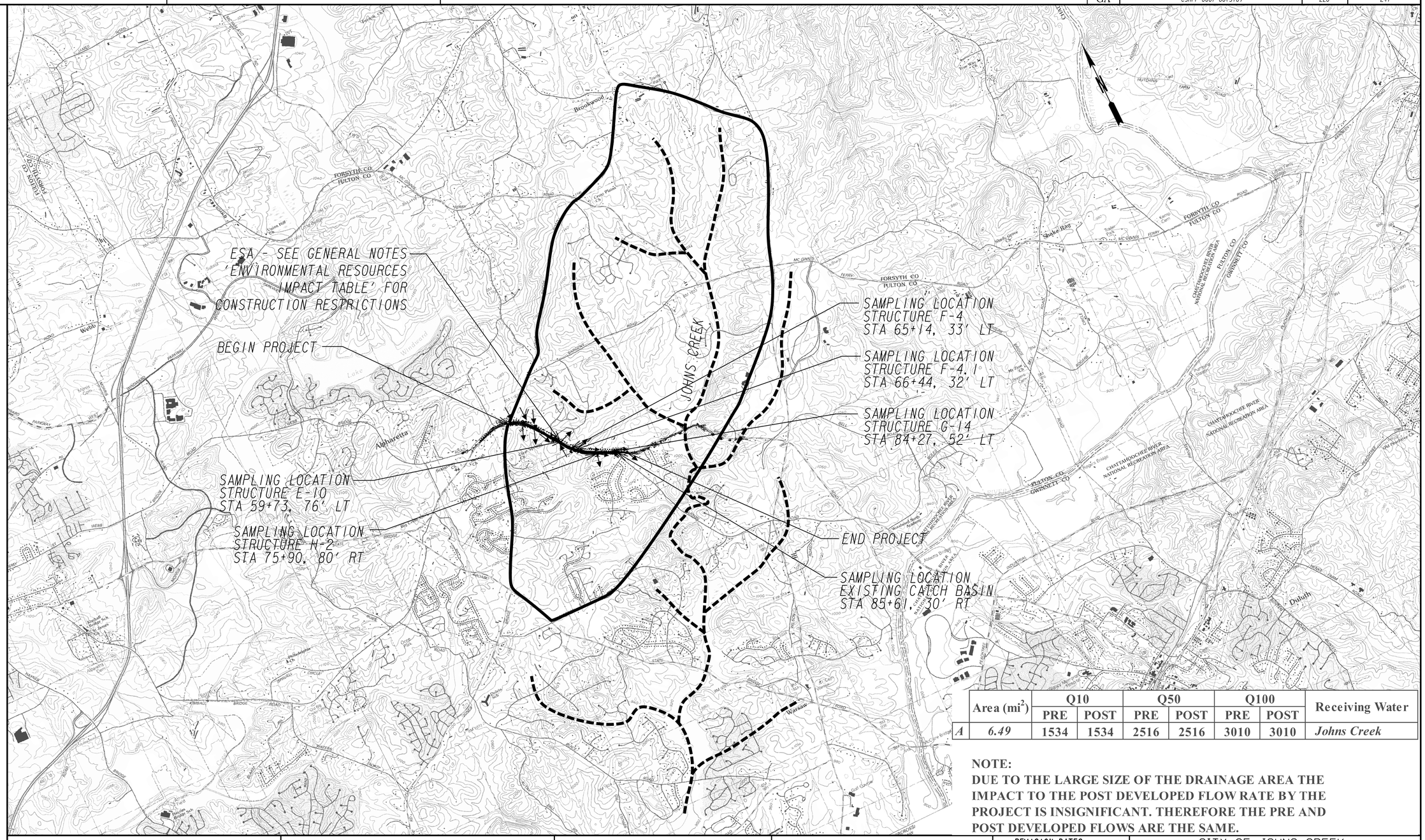
CITY OF JOHNS CREEK
PUBLIC WORKS

BMP LOCATION DETAILS
PHASE 3

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

DRAWING No.
54-030

3/1/2007 GPLN



	Area (mi^2)	Q10		Q50		Q100		Receiving Water
		PRE	POST	PRE	POST	PRE	POST	
A	*6.49*	1534	1534	2516	2516	3010	3010	*Johns Creek*

NOTE:
DUE TO THE LARGE SIZE OF THE DRAINAGE AREA THE IMPACT TO THE POST DEVELOPED FLOW RATE BY THE PROJECT IS INSIGNIFICANT. THEREFORE THE PRE AND POST DEVELOPED FLOWS ARE THE SAME.

MITCHELL GREENWAY, P.E.
GSWCC LEVEL II CERT. #8162

Johns Creek

Stantec

SCALE IN FEET
0 2000 4000 8000

REVISION DATES

CITY OF JOHNS CREEK
PUBLIC WORKS

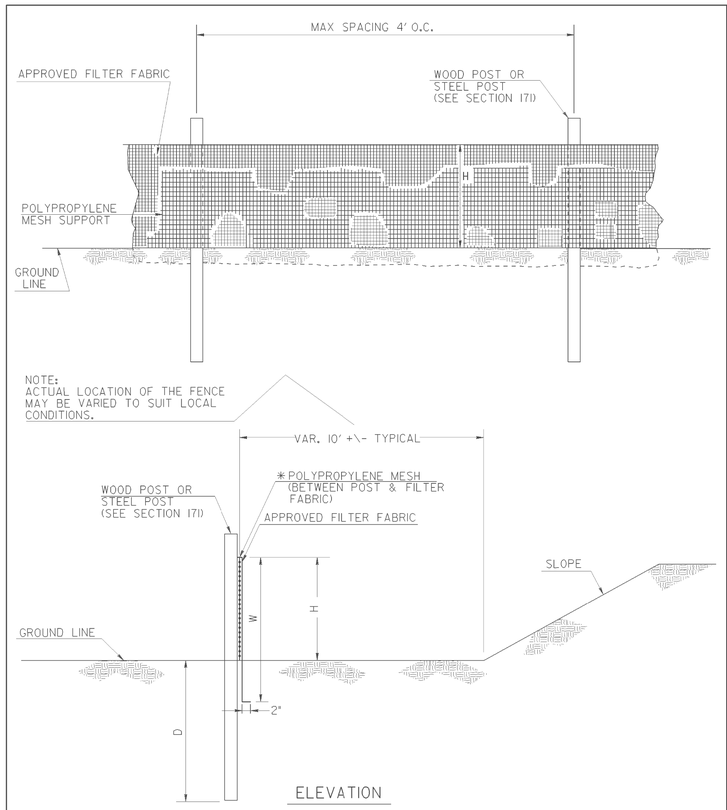
WATERSHED MAP
SITE MONITORING PLAN

SR 120/ABBOTTS BRIDGE ROAD
JONES BRG RD TO PARSONS RD
CSHPP-0007-00(310) 06/17/2015

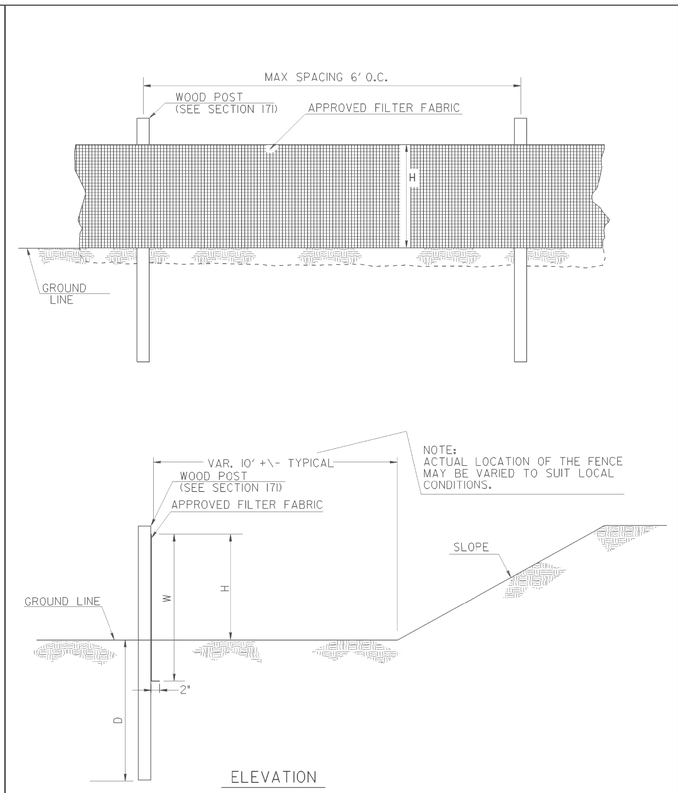
DRAWING NO.
55-001

3/1/2007 GPLN

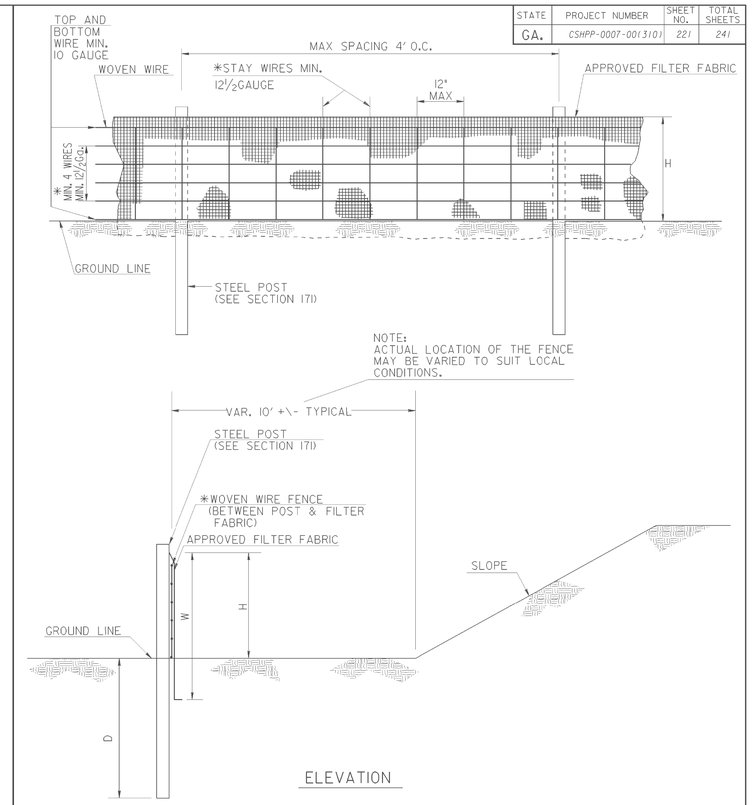
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-000T-00(310)	221	241



SINGLE ROW TYPE C SILT FENCE WITH POLYPROPYLENE MESH SUPPORT



SINGLE ROW TYPE A SILT FENCE



SINGLE ROW TYPE C SILT FENCE WITH WOVEN WIRE SUPPORT

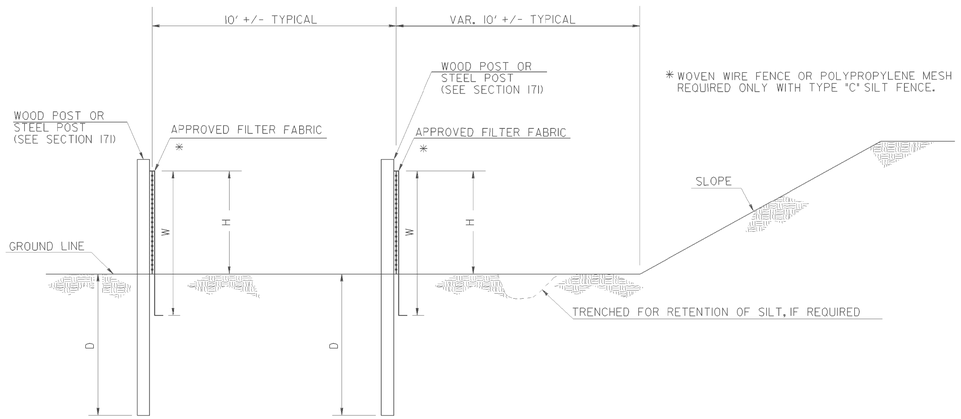
FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.

NOTES:

1. WIRE STAPLES SHALL BE AT LEAST 17 GAUGE, WITH LEGS AT LEAST ½ INCHES LONG AND A CROWN AT LEAST ¾INCHES WIDE. NAILS SHALL BE AT LEAST 14 GAUGE, 1INCH LONG , WITH BUTTON HEADS AT LEAST ¾ INCHES WIDE.
2. NAILS OR STAPLES SHALL BE EVENLY PLACED WITH AT LEAST 5 PER POST FOR TYPE A FENCE AND 4 PER POST FOR TYPE C FENCE.
3. THE VERTICAL WIRES FOR THE WOVEN WIRE SUPPORT FENCE SHALL HAVE A MAXIMUM SPACING OF 12 INCHES. THE TOP AND BOTTOM WIRES SHALL BE AT LEAST 10 GAUGE AND ALL OTHER WIRES SHALL BE AT LEAST 12½ GAUGE.
4. TEMPORARY SILT FENCE INSTALLATION IS DIFFERENT THAN THE SILT RETENTION BARRIER INSTALLATION.
5. SEE SECTION 171 FOR SILT FENCE SPECIFICATIONS.
6. SEE SECTION 894 FOR FENCING SPECIFICATIONS.
7. SEE QPL-36 FOR A LIST APPROVED SILT FENCE FABRIC.
8. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS UNLESS PERMITTED.

DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA		
REVISION	CONSTRUCTION DETAILS TEMPORARY SILT FENCE		
	NO SCALE	REV. AND REDRAWN JAN. 2011	
BY			NUMBER D-24A (SHEET 1 OF 4)

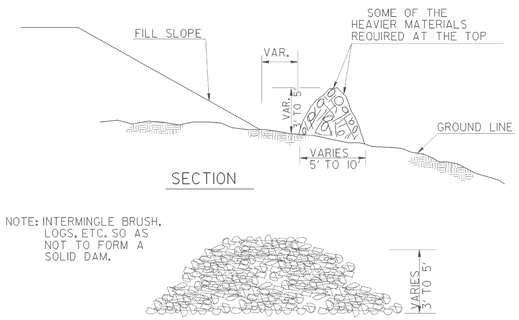
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	CSHPP-0007-00(310)	222	241



ELEVATION

DOUBLE ROW SILT FENCE

FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.



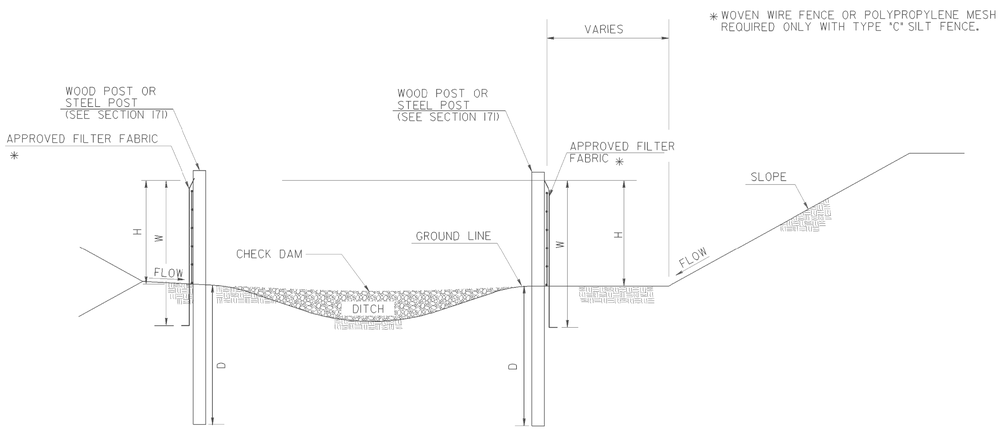
SECTION

NOTE: INTERMINGLE BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM.

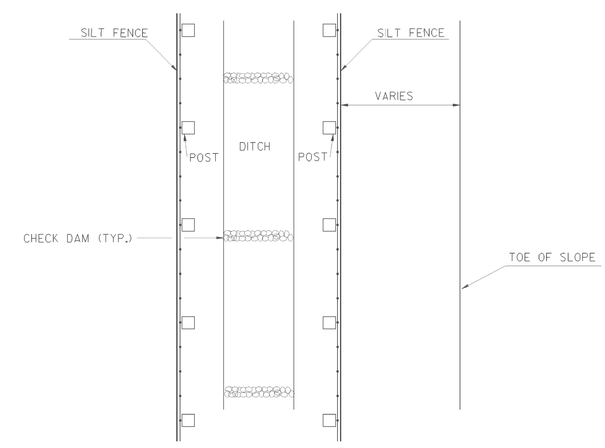
FRONT VIEW

NOTE: BRUSH BARRIER(S) WILL BE INCLUDED IN PAYMENT FOR CLEARING & GRUBBING.

BRUSH BARRIER DETAILS
(FOR USE IN RURAL AREAS)



ELEVATION



PLAN

NOTE: TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

SILT FENCE
PERIMETER INSTALLATION ALONG DITCH SECTION

FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.

BY	REVISION	DATE

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS

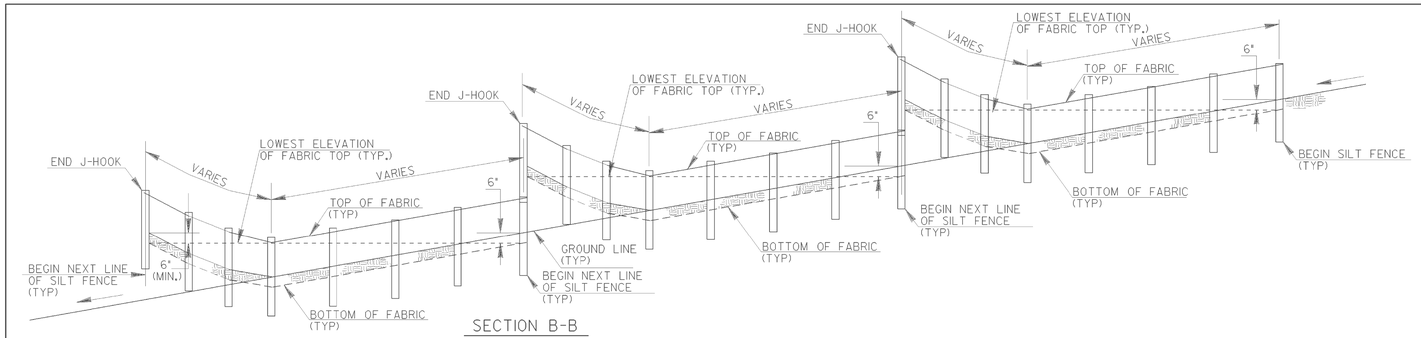
TEMPORARY SILT FENCE

BERM DITCH, INSTALLATION, BRUSH BARRIER

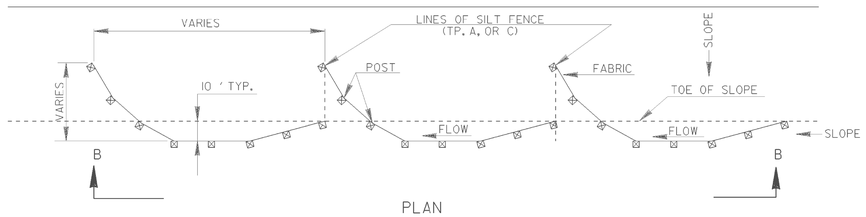
NO SCALE — REV. AND REDRAWN JAN. 2011

NUMBER
D-24B
(SHEET 2 OF 4)

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	223	241

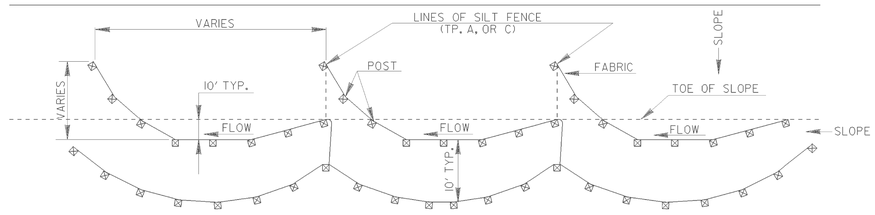


SECTION B-B



PLAN

SINGLE ROW SILT FENCE



PLAN

DOUBLE ROW SILT FENCE

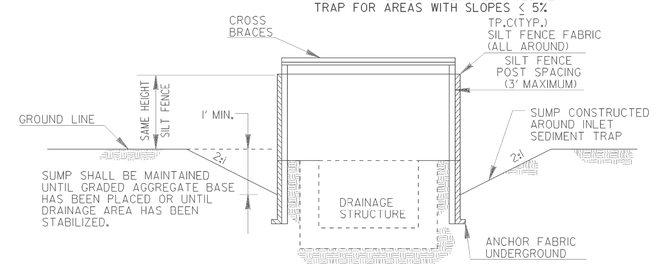
TYPICAL J HOOK SPACING		
SLOPE PERCENT	TYPE OF SILT FENCE	MINIMUM SPACING (FEET)
1% TO 2%	TYPE A	100' ±
2% TO 3%	TYPE A	50' ±
3% TO 4%	TYPE C	50' ±
4% TO 5%	TYPE C	25' ±

NOTE:

1. IF THE GRADE IS BETWEEN 0 TO 1 PERCENT, THE SILT FENCE SHALL BE PLACED ACROSS THE DITCH.
2. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

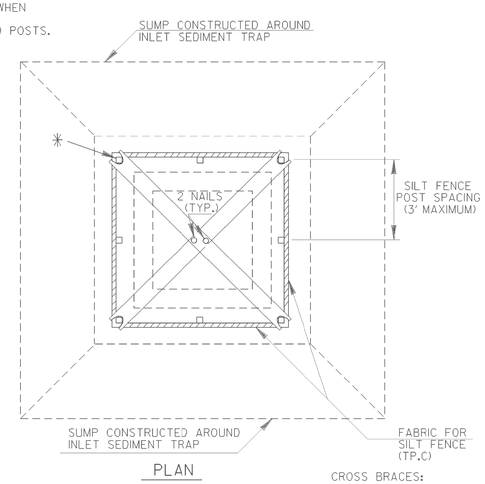
TYPICAL LOCATION AROUND DROP INLETS

ALT. TO PREFABRICATED INLET SEDIMENT TRAP FOR AREAS WITH SLOPES ≤ 5%



ELEVATION

✳ CROSS BRACING REQUIRED WHEN USING "ALTERNATE" TYPE C PRODUCTS WHICH USE WOOD POSTS.



PLAN

CROSS BRACES:

TWO - 2 X 4's WITH ENDS TO FIT POST, PROVIDING STURDY SUPPORT, OR AN APPROVED ALTERNATE

NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH.

NOTE:
SEE SEPARATE SHEET ENTITLED "TEMPORARY SILT FENCE DETAILS" FOR SILT FENCE ERECTION DETAILS.

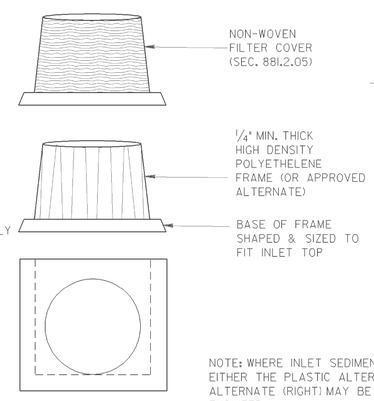
(PLASTIC ALTERNATE)

NOTE:
THE DRAINAGE AREA ENTERING THE INLET SEDIMENT TRAP SHALL BE NO GREATER THAN ONE ACRE.

TYPICAL CONSTRUCTION SEQUENCE FOR INLET SEDIMENT TRAP ALTERNATE

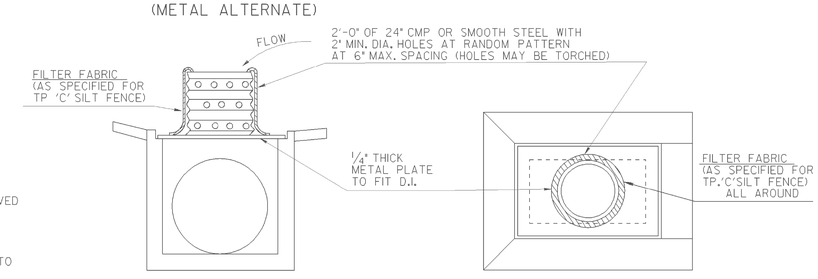
1. EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE.
2. PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURING PROPER SEATING OF FRAME TO STRUCTURE.
3. SLIDE THE FILTER OVER THE FRAME.
4. FILL THE FILTER POCKETS WITH SOIL, #57 GRAVEL OR EQUIVALENT. THE FILTER POCKETS SHOULD BE COMPLETELY FILLED TO ENSURE A GOOD SEAL BETWEEN THE GROUND AND INLET STRUCTURE.
5. BACK FILL AROUND THE FRAME AND FILTER ASSEMBLY IS NOT REQUIRED TO COMPLETE INSTALLATION; HOWEVER, BACK FILLING MAY BE NECESSARY TO COMPLETE EXCAVATION REQUIREMENTS FOR THE SITE.

NOTE:
INLET SEDIMENT TRAP ALTERNATE SHALL BE AS APPROVED BY THE GA. D.O.T. OFFICE OF MATERIALS & RESEARCH. DETAILS & SPECIFICATIONS NOT SHOWN ARE PER THE MANUFACTURER'S REQUIREMENTS.



SIDE VIEW

(METAL ALTERNATE)



SIDE VIEW

TOP VIEW

NOTE: WHERE INLET SEDIMENT TRAPS ARE SPECIFIED, EITHER THE PLASTIC ALTERNATE (LEFT) OR THE METAL ALTERNATE (RIGHT) MAY BE USED AS APPROVED BY THE ENGINEER.

NOTE:
INLET SEDIMENT TRAP AND INLET TO BE BUILT CONTINUOUS WITH PIPE

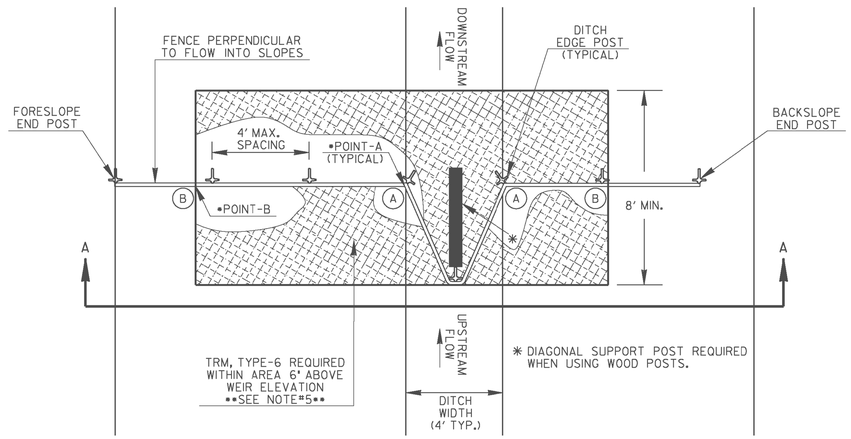
NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH

NOTE: SEE SEPARATE DETAILS FOR SILT FENCE AROUND DROP INLETS.

INLET SEDIMENT TRAP - FOR DROP INLETS

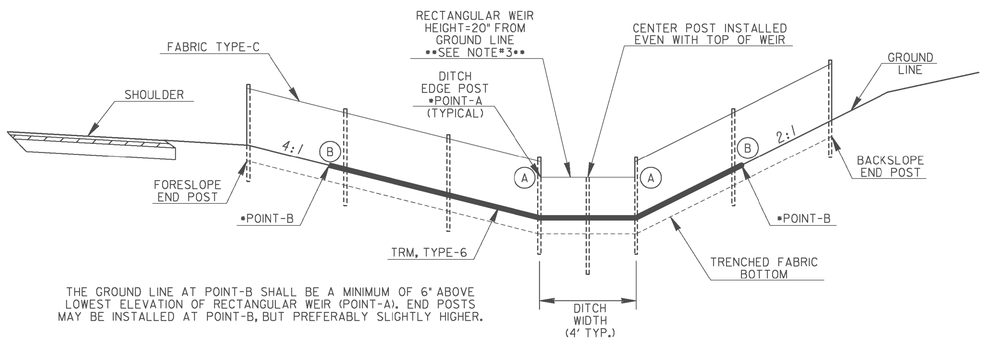
DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
REVISION	CONSTRUCTION DETAILS TEMPORARY SILT FENCE J-HOOK, INLET SEDIMENT TRAPS
	NO SCALE — JANUARY 2011
BY	NUMBER D-24C (SHEET 3 OF 4)

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	224	241



PLAN VIEW

TYPICAL FABRIC CHECK DAM SPACING	
GRADE OF DITCH	MINIMUM SPACING (FEET)
LESS THAN 1%	100' ±
1% TO 3%	75' ±
3% TO 6%	50' ±
6% TO 8%	25' ±



THE GROUND LINE AT POINT-B SHALL BE A MINIMUM OF 6" ABOVE LOWEST ELEVATION OF RECTANGULAR WEIR (POINT-A). END POSTS MAY BE INSTALLED AT POINT-B, BUT PREFERABLY SLIGHTLY HIGHER.

SECTION A-A

NOTE: CROSS-SECTION SHOWN IS AN EXAMPLE OF A TYPICAL CUT SECTION WITH A 4-FT FLAT BOTTOM DITCH. ACTUAL FABRIC CHECK DAMS SHALL BE INSTALLED SIMILARLY ACCORDING TO ROADWAY CROSS-SECTIONS.

NOTES:

1. FABRIC CHECK DAMS MAY BE USED FOR FLOWS UP TO 2.0-CFS. A ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM POINT FOR FLOWS GREATER THAN 2.0-CFS.

2. FABRIC CHECK DAMS SHALL NOT BE PLACED WITHIN FLOWING STATE WATERS.

3. FABRIC CHECK DAMS MAY BE USED IN DITCHES WITH DEPTHS AT LEAST 26-IN. IF DITCH DEPTH IS LESS THAN 26-IN, THE WEIR INVERT MAY BE LOWERED SLIGHTLY IN THE FIELD TO PROVIDE 6-IN MINIMUM FREEBOARD ABOVE POINT-A OR TO MATCH SPACING OF WIRE SUPPORT. THE WEIR HEIGHT SHALL BE NO LESS THAN 15-IN. THE DESIGNER SHALL CONSIDER OTHER APPROPRIATE BMPs FOR CONCENTRATED FLOW FOR DITCH DEPTHS LESS THAN 26-IN.

4. THE FOLLOWING STEPS ARE RECOMMENDED FOR PROPER FABRIC CHECK DAM INSTALLATION:

   A) DETERMINE DITCH CENTERLINE AND USE A LINE LEVEL OR OTHER MEANS TO FIND POINT-B WITHIN THE DITCH FORESLOPE AND BACKSLOPE TO PROVIDE 6-IN MINIMUM FREEBOARD ABOVE POINT-A.

   B) CREATE TRENCH 6-IN BELOW DITCH GRADE TO FIT LAYOUT FROM STEP-A WITH MINIMAL SOIL DISTURBANCE.

   C) LAYOUT TURF REINFORCEMENT MATTING (TRM), TYPE-6 TO PROVIDE PROTECTION A MINIMUM LENGTH OF 8-FT DOWNSTREAM OF CENTER POST TO FUNCTION AS A SPLASH PAD TO PREVENT SCOURING. ADDITIONAL NECESSARY TRM SHALL BE OVERLAPPED 3-FT. THE WIDTH SHALL BE THE DISTANCE BETWEEN POINT-B ON THE DITCH FORESLOPE AND POINT-B ON BACKSLOPE.

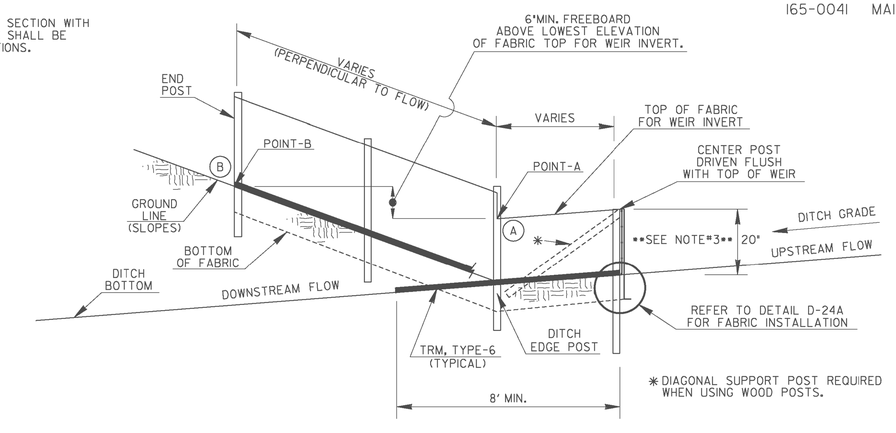
   D) INSTALL FENCE POSTS THROUGH TRM WITHIN TRENCH. CENTER POST AND POSTS WITHIN WEIR AREA SHALL BE INSTALLED FLUSH WITH WEIR. CUT TRM WITHIN TRENCH FOLLOWING CHECK DAM LAYOUT AND SAVE UPSTREAM PORTION OF TRM FOR FURTHER USE.

   E) PROPERLY INSTALL TYPE-C SILT FENCE. TRENCH BACKFILL SHALL BE COMPACTED WITH A HAND TAMPER, JUMPING JACK COMPACTOR, OR PLATE COMPACTOR TO PREVENT UNDERMINING.

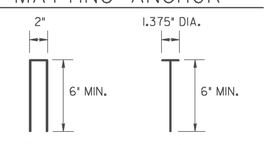
   F) INSTALL PREVIOUSLY CUT TRM FROM STEP-D UPSTREAM AGAINST CHECK DAM. INSTALLING UPSTREAM AND DOWNSTREAM TRM ACCORDING TO DETAIL D-35 FOR THIS TEMPORARY APPLICATION IS NOT REQUIRED. HOWEVER, TRM SHALL HAVE PROPER CONTACT WITH GROUND SURFACE, ANCHORED 6-IN MAXIMUM SPACING ALONG THE EDGES, AND ADEQUATELY WITHIN THE MATTED AREA.

5. TEMPORARY INSTALLATION OF TRM WITH FABRIC CHECK DAMS SHALL BE INCLUDED IN THE LINEAR COST OF THE CONSTRUCTION, REMOVAL, AND MAINTENANCE OF EACH FABRIC CHECK DAM. NO ADDITIONAL PAYMENT WILL BE MADE.

PAY ITEMS:
163-0528 CONSTRUCT & REMOVE FABRIC CHECK DAM, TYPE-C SILT FENCE (LF)
165-0041 MAINTENANCE OF CHECK DAMS - ALL TYPES (LF)



TURF REINFORCEMENT MATTING ANCHOR



NOTE: TURF REINFORCEMENT MATTING SHALL BE ANCHORED WITH 8-GAUGE METAL STAPLES OR ROUND TOP ANCHORS. ANCHORS SHALL BE LONG ENOUGH TO PROVIDE SUFFICIENT GROUND PENETRATION TO RESIST PULL OUT.

DATE	REVISION	BY

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

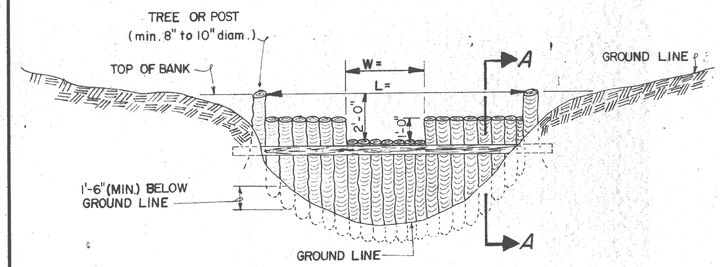
CONSTRUCTION DETAILS
TEMPORARY SILT FENCE
FABRIC CHECK DAM

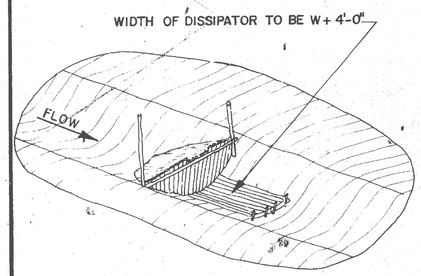
NO SCALE — REV. AND REDRAWN, JULY 2015

NUMBER D-24D (SHEET 4 OF 4)

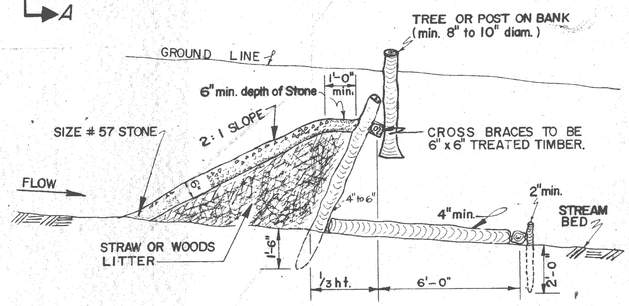
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	225	241

TYPE 1



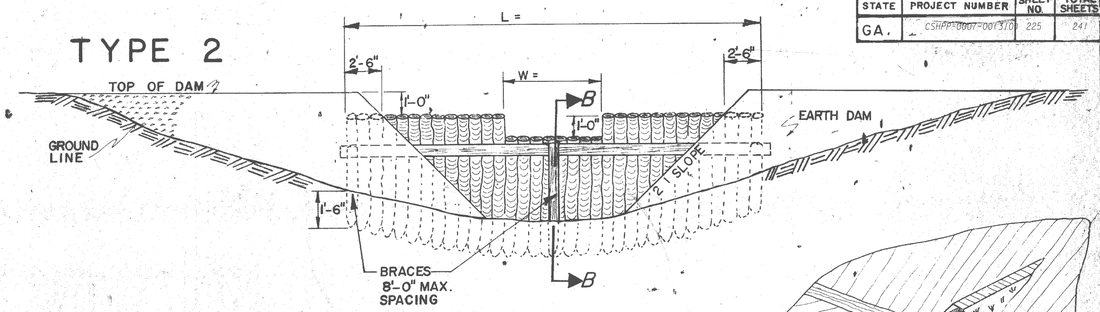


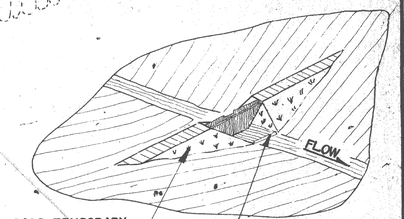
PLAN

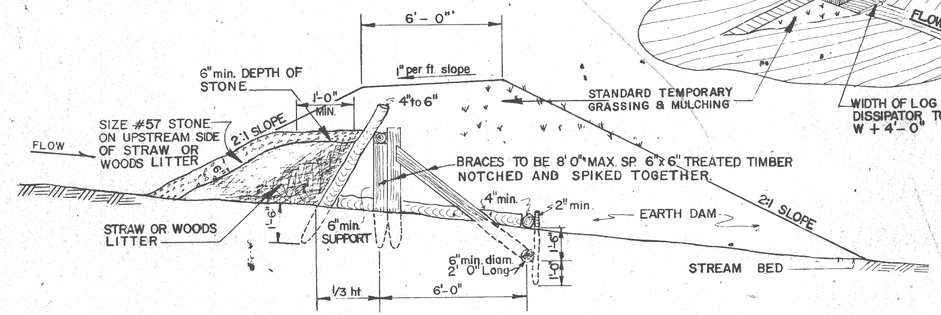


SECTION A - A

TYPE 2







SECTION B - B

WIDTH OF LOG DISSIPATOR TO BE W + 4'-0"

PROFILE

USES:
THESE ITEMS ARE USED ON EASEMENTS AND IN RURAL WOODED AREAS. THE PURPOSE OF THE CHECK DAM IS TO REDUCE FLOW VELOCITY. LOWER VELOCITIES REDUCE EROSION POTENTIAL AND ALLOW SOME SUSPENDED SEDIMENT TO DEPOSIT. THEY ARE USED DOWNSTREAM OF DRAINAGE STRUCTURES BUT SHOULD NOT BE USED IN FLOWING STREAMS. CHECK DAMS ARE USUALLY CONSTRUCTED OF ALL NATURAL MATERIALS FROM THE AREA AND LEFT IN PLACE. THIS ITEM MAY BE USED ON THE R.O.W. BUT HAS BEEN LARGELY REPLACED BY DITCH CHECKS OF SILT FENCE OR HAY BALES OR RIPRAP. IT MAY BE USED IN AREAS WHERE BACKUP IS NEEDED TO PROTECT TROUT STREAMS OR LAKES FROM SILTATION PRODUCED BY MAJOR FLOOD EVENTS. THIS ITEM IS USED ON FOREST SERVICE LANDS.

	BY	REVISIONS	DATE
J.M.W.	Added "Uses" Article		5-14-69
	JLP	Checked	3-1-71
	JLP	Traced	12-7-72
	R.M.U.	Slope Cover Requirement	4-29-76

CONSTRUCTION DETAIL
EROSION CONTROL CHECK DAMS

AUGUST, 1969

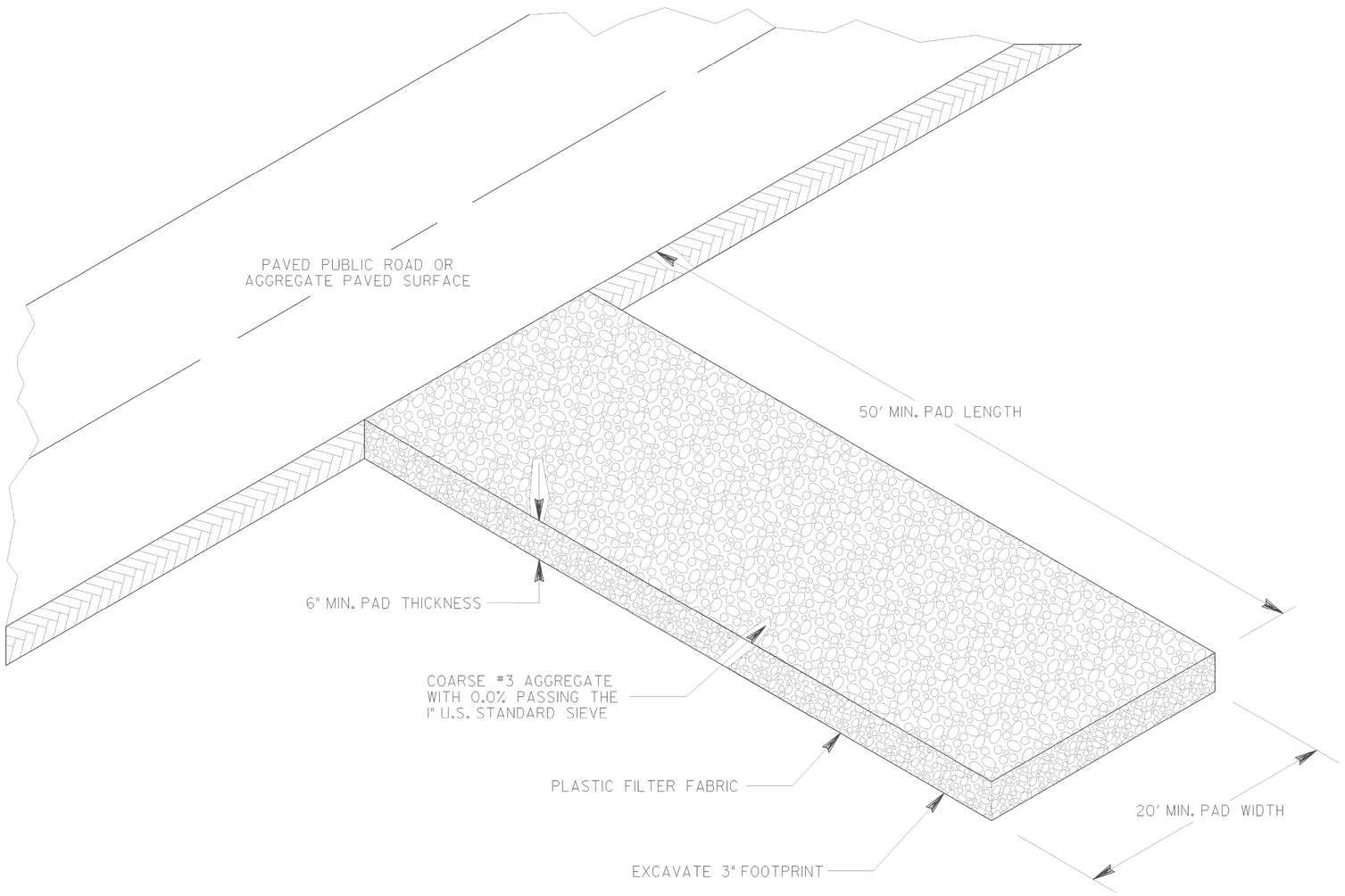
DESIGNED JMW
DRAWN JMW
TRACED JMW
CHECKED JLP

SUBMITTED
APPROVED

D-25

K+E PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-00(310)	226	241



NOTES:
1) STONE AGGREGATE SHALL BE KEPT LOOSE OR SCARIFIED WHEN AGGREGATE BECOMES CONSOLIDATED.
2) CONSTRUCTION EXITS ARE NOT REQUIRED FOR DIRT PUBLIC ROADS.

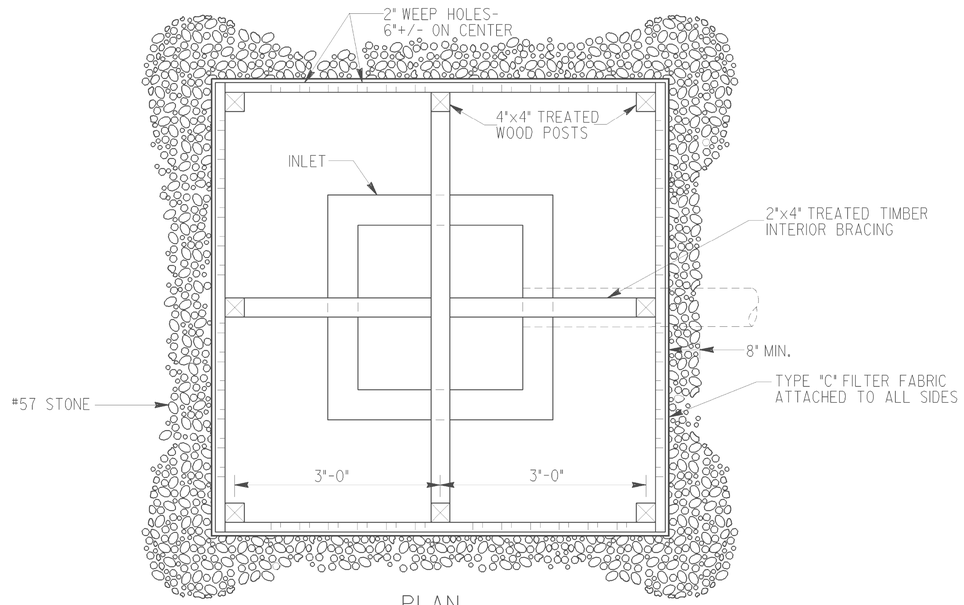
MAINTENANCE

THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH COARSE #3 AGGREGATE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO TRAP SEDIMENT. ALL MUD AND DEBRIS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

PAY ITEM: 163-0300__CONSTRUCTION EXIT___EACH

1-19-11	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
REV. CONSTR. EXIT LABELS	REVISION	CONSTRUCTION DETAILS CONSTRUCTION EXIT NO SCALE — FEBRUARY 2001
TPC	BY	NUMBER D-41

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	CSHPP-0007-001310	227	241

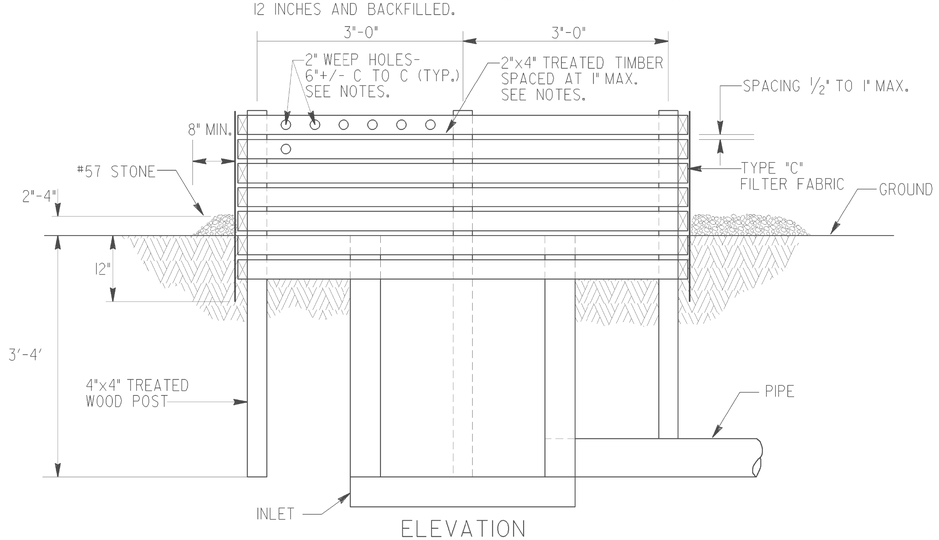


PLAN

NOTES:

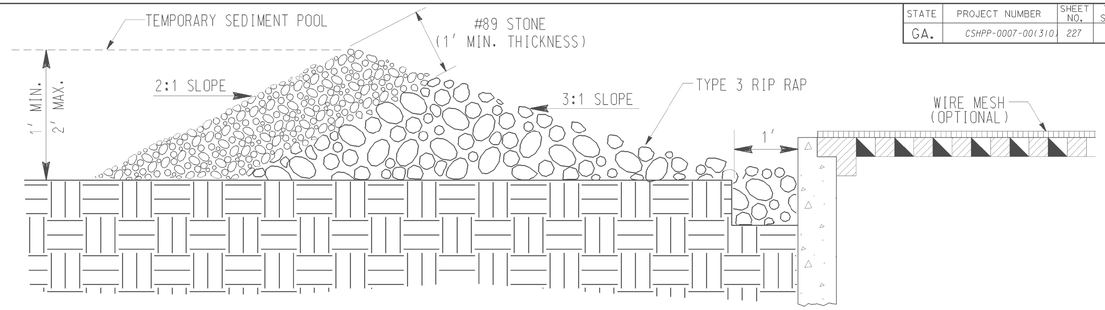
BAFFLE BOX SHALL BE CONSTRUCTED OF 2"x4" TREATED TIMBER SPACED A MAXIMUM OF 1" APART OR OF PLYWOOD WITH WEEP HOLES 2" IN DIAMETER PLACED APPROXIMATELY 6" ON CENTER VERTICALLY AND HORIZONTALLY.

GRAVEL SHALL BE PLACED OUTSIDE THE BOX, ALL AROUND THE INLET, TO A DEPTH OF 2 TO 4 INCHES. THE ENTIRE BOX SHALL BE WRAPPED IN TYPE "C" FILTER FABRIC THAT SHALL BE ENTRENCHED 12 INCHES AND BACKFILLED.

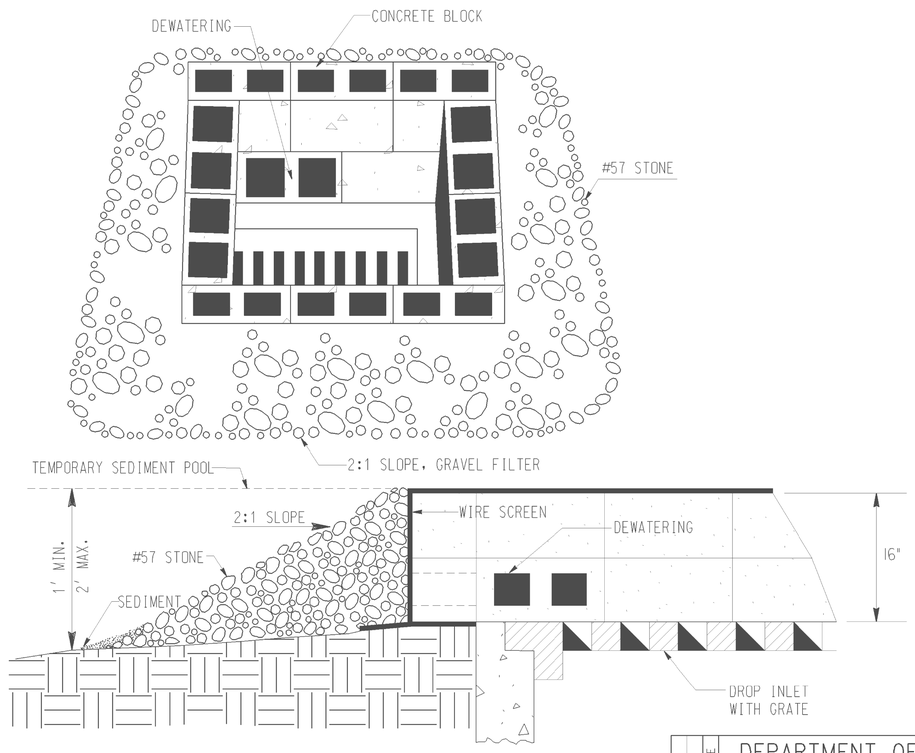


ELEVATION

BAFFLE BOX (Sd2-B)



GRAVEL DROP INLET PROTECTION
(GRAVEL DONUT) Sd2-G



BLOCK & GRAVEL DROP
INLET PROTECTION
(Sd2-Bg)

BASIS OF PAYMENT:
CONSTRUCT AND REMOVE INLET SEDIMENT TRAP _____ EACH

DATE	REVISION	BY

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAIL
INLET SEDIMENT TRAPS
BAFFLE BOX Sd2-B
BLOCK AND GRAVEL DROP INLET PROTECTION Sd2-Bg
GRAVEL DROP INLET PROTECTION Sd2-G

NO SCALE — MAY 2008

NUMBER
D-42

5/7/2008 2:51:42 PM \\GDOT-DSN1\GDPLOT\QCF\go_fitf_output.qcf gowens T:\GARY\new_d-42\d-42.prf