



**GENERAL NOTES:**

1. ALL CONSTRUCTION SHALL COMPLY WITH THE STONEGATE VILLAGE METROPOLITAN DISTRICT SPECIFICATIONS, THE TOWN OF PARKER ROADWAY DESIGN AND CONSTRUCTION CRITERIA, THE TOWN OF PARKER STORM DRAINAGE AND ENVIRONMENTAL CRITERIA, THE URBAN DRAINAGE AND FLOOD CONTROL DISTRICT, THE COLORADO STATE BOARD OF HEALTH, THE ENVIRONMENTAL PROTECTION AGENCY AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
2. THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES AND THE TOWN OF PARKER PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ANY EXISTING UTILITY (INCLUDING DEPTHS) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. ALL ITEMS SHOWN ON THE PLANS AS EXISTING ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE ACTUAL LOCATIONS MAY VARY FROM THE PLANS, ESPECIALLY IN THE CASE OF UNDERGROUND UTILITIES. WHENEVER THE CONTRACTOR DISCOVERS A DISCREPANCY IN LOCATIONS, HE SHALL CONTACT THE ENGINEER IMMEDIATELY.
3. THE DISTRICT ENGINEER AND OTHER APPROVING AGENCIES ARE TO BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ALL PERMITS WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK, INCLUDING STREET CUTS, UTILITY INTERFERENCE AND TRAFFIC CONTROL.
5. ALL CONCRETE SHALL BE A MINIMUM OF CLASS B, 6-SACK, TYPE II, 3000 POUND COMPRESSION STRENGTH. ALL CONCRETE ASSOCIATED WITH ROADWAY CONSTRUCTION SHALL BE CLASS D.
6. THE DESIGN ENGINEER SHALL SUBMIT ONE (1) SET OF ROLLED "AS-BUILT" BLUELINE PRINTS TO THE DESIGNATED TOWN AUTHORITY FOR APPROVAL PRIOR TO PRINTING MYLAR SEPIAS AND ELECTRONIC FILES FOR THE TOWN. AFTER APPROVAL HAS BEEN GRANTED BY THE DESIGNATED TOWN AUTHORITY, FULL SIZE MYLAR SEPIA PRINTS SHALL BE TRANSMITTED TO THE TOWN.
7. ALL BACKFILL MATERIAL SHALL BE COMPACTED TO ALL APPLICABLE TOWN AND DISTRICT STANDARDS. COMPACTION TESTS MUST BE SUBMITTED TO THE TOWN AND DISTRICT PRIOR TO PROBATIONARY ACCEPTANCE.
8. ALL CURBS SHALL BE CAREFULLY AND FIRMLY BACKFILLED BY THE CONTRACTOR. ANY EXCESS MATERIAL FROM SUBGRADE TRIMMING SHALL NOT BE LEFT IN THE STREET CORE, BUT SHALL BE SPREAD UNIFORMLY IN A 20-FOOT WIDE ZONE BEHIND THE WALK.
9. REFER TO OVERLOT GRADING AND EROSION CONTROL PLAN FOR GRADING NOTES.
10. EXPANSION JOINTS WILL BE PLACED IN ALL SIDEWALKS AND CURB AND GUTTER AT PCs, Pts, AND AT ANY FIXED OBJECT, BUT IN NO CASE ANY FARTHER THAN 500 FEET APART.
11. THE APPLICANT IS 470 COMPARK, LLC.
12. THE UTILITY CONTRACTOR THAT INSTALLS SANITARY SEWER, STORM SEWER, AND WATER SHALL, AFTER PROPERLY COMPLETING THE WORK, WALK THE SITE WITH THE OWNER'S REPRESENTATIVE(S) TO INSPECT MANHOLES, HYDRANTS, VALVE BOXES, AND INLETS PRIOR TO THE START OF WORK BY THE CURB, GUTTER, AND WALK CONTRACTOR. A SIMILAR FIELD INSPECTION SHALL OCCUR WITH THE UTILITY CONTRACTOR AND CURB CONTRACTOR TO INSPECT THESE ITEMS PLUS CURB STOP BOXES AND CONCRETE WORK PRIOR TO THE START OF WORK BY THE PAVING CONTRACTOR. THESE FIELD INSPECTIONS ARE INTENDED TO HELP ESTABLISH RESPONSIBILITY FOR ANY NECESSARY REPAIRS, CLEANING, ETC. THAT ARE NEEDED. THESE INSPECTIONS WITH A REPRESENTATIVE OF THE OWNER ARE IN ADDITION TO ANY INSPECTIONS BY REPRESENTATIVES OF THE TOWN OF PARKER OR COTTONWOOD WATER AND SANITATION DISTRICT.
13. ALL TESTING AND INSPECTION FOR COMPLIANCE WITH TOWN OF PARKER STANDARDS SHALL BE COMPLETED PRIOR TO PROBATIONARY ACCEPTANCE.
14. THE DESIGN ENGINEER SHALL SUBMIT ONE (1) SET OF ROLLED "AS-BUILT" BLUELINE PRINTS AND ELECTRONIC FILES TO THE DISTRICT ENGINEER FOR APPROVAL PRIOR TO PRINTING MYLAR SEPIAS FOR THE DISTRICT. AFTER APPROVAL HAS BEEN GRANTED BY THE DISTRICT ENGINEER, FULL SIZE MYLAR SEPIA PRINTS SHALL BE TRANSMITTED TO THE COTTONWOOD WATER AND SANITATION DISTRICT OFFICE AND AN ADDITIONAL SET OF ROLLED BLUELINE PRINTS SHALL BE TRANSMITTED TO THE DISTRICT ENGINEER'S OFFICE PRIOR TO PROBATIONARY ACCEPTANCE.
15. TRENCHES SHALL BE EXCAVATED AND THE PIPE EXPOSED FOR THE INSPECTION AT ANY LOCATION ON THE PROJECT IF SO ORDERED BY THE INSPECTOR.
16. CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF LINES (WATER AND SEWER) FOR UP TO TWO (2) YEARS FROM THE DATE OF PROBATIONARY ACCEPTANCE OF THE LINES BY THE DISTRICT. ANY MALFUNCTION DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE CONTRACTOR TO THE SATISFACTION OF THE DISTRICT ENGINEER AT NO EXPENSE TO THE DISTRICT.
17. SURFACE GRADES ARE TO BE WITHIN PLUS OR MINUS ONE FOOT OF FINISHED GRADE AND VERIFICATION OF COMPACTION RESULTS OBTAINED PRIOR TO THE INSTALLATION OF WATER AND SEWER LINES. RESULTS MUST BE SUBMITTED TO THE DISTRICT ENGINEER.
18. NO WORK SHALL BE BACKFILLED UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE DISTRICT ENGINEER OR REPRESENTATIVE OF THE DISTRICT ENGINEER.
19. ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
"X" FOR SANITARY SERVICE SEWERS  
"V" FOR WATER SERVICES
20. NO TREES SHALL BE ALLOWED IN EASEMENTS OR WITHIN 8' OF ANY WATER OR SANITARY SEWER MAINS IN RIGHT-OF-WAY. NO TREES ALLOWED WITHIN 7' OF THE EDGE OF ANY STORM SEWER.
21. SOURCE BENCHMARKS:  
DOUGLAS COUNTY BM 1.15010  
A DOUGLAS COUNTY G5 MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD.  
ELEVATION = 5752.84 (NAVD 88)
- SITE BENCHMARKS:  
1. A NO. 5 REBAR WITH 2" ALUMINUM CAP STAMPED "LS 28286, 2001" FOUND AT THE SOUTHWEST CORNER OF SECTION 6, T6S, R66W LOCATED ON THE WEST LINE OF FIRST STREET APPROXIMATELY 1000 FEET NORTH OF ELM AVENUE.  
ELEVATION = 5845.51
2. A 2.5" IRON PIPE WITH 3.25" ALUMINUM CAP STAMPED "PLS 12405, 1997" FOUND AT THE SOUTHEAST CORNER OF SECTION 6, T6S, R66W LOCATED APPROXIMATELY 960 FEET NORTH OF THE CENTERLINE OF AVENTERRA PARKWAY AND APPROXIMATELY 1050 FEET WEST OF THE CENTERLINE OF CHAMBERS ROAD.  
ELEVATION = 5808.06
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHETHER SHOWN ON THESE PLANS OR NOT. CONTRACTOR SHALL CONTACT REPRESENTATIVES OF THE RESPECTIVE UTILITIES AND HAVE ALL UTILITIES FIELD LOCATED PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING STRUCTURES AND UTILITIES SHOWN ON THE DRAWINGS, TO ASCERTAIN WHETHER ANY STRUCTURES AND UTILITIES MAY EXIST, AND REPAIR AND/OR REPLACE ANY STRUCTURES AND/OR UTILITIES THAT ARE DAMAGED BY THE CONTRACTOR.
23. T.C. INDICATES TOP BACK OF WALK GRADE FOR COMBINATION CURB, GUTTER, AND SIDEWALK, OR TOP BACK OF CURB FOR OTHER CURB AND GUTTER TYPES.
24. ALL DIMENSIONS AND RADII ARE TO FLOWLINE UNLESS OTHERWISE NOTED.
25. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH A SET OF "AS-BUILT" PLANS MARKED WITH ALL DEVIATIONS FROM THE CONSTRUCTION PLANS PRIOR TO INITIAL ACCEPTANCE.
26. ALL STATIONING IS ON CENTERLINE OF RIGHT OF WAY UNLESS OTHERWISE NOTED.

**CONSTRUCTION NOTES:**

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE LATEST EDITION OF THE TOWN OF PARKER ROADWAY DESIGN AND CONSTRUCTION CRITERIA MANUAL, AND THE TOWN OF PARKER STORM DRAINAGE AND ENVIRONMENTAL CRITERIA MANUAL.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF PARKER PUBLIC WORKS DEPARTMENT. THE TOWN RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
3. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING WILL NOT BE SCHEDULED UNTIL THE GRADING PERMIT AND ALL OTHER NECESSARY PERMITS HAVE BEEN OBTAINED.
4. A DEVELOPMENT REVIEW ENGINEER SHALL BE CONTACTED A MINIMUM OF 24 HOURS PRIOR TO A NECESSARY INSPECTION. IF A DEVELOPMENT REVIEW ENGINEER IS NOT AVAILABLE AFTER PROPER NOTICE OF CONSTRUCTION ACTIVITY HAS BEEN PROVIDED, THE PERMITTEE MAY COMMENCE WORK IN THE DEVELOPMENT REVIEW ENGINEER'S ABSENCE. HOWEVER, TOWN OF PARKER RESERVES THE RIGHT TO REJECT THE IMPROVEMENT IF SUBSEQUENT TESTING REVEALS AN IMPROPER INSTALLATION.
5. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ACTUAL CONSTRUCTION. FOR INFORMATION, CONTACT DENVER INTER-UTILITY GROUP AT 303-534-6700, OR 1-800-922-1987. THE CONTRACTOR SHALL FIELD VERIFY SIZE AND HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
6. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE PLANS, APPROVED BY THE TOWN OF PARKER PUBLIC WORKS DIRECTOR, AND ONE (1) COPY OF THE ROADWAY DESIGN AND CONSTRUCTION CRITERIA AT THE JOB SITE AT ALL TIMES.
7. ALL PROPOSED STREET CUTS TO EXISTING PAVEMENTS FOR UTILITIES, STORM SEWER, OR FOR OTHER PURPOSES ARE LISTED AND REFERENCED BELOW:  
WATER TIE-IN SEE OFFSITE SANITARY SEWER AND WATER CONSTRUCTION PLANS  
SANITARY SEWER CONNECTION SEE OFFSITE SANITARY SEWER AND WATER CONSTRUCTION PLANS  
STORM SEWER CONNECTION SEE ROADWAY AND STORM DRAINAGE CONSTRUCTION PLANS
8. A PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE SUBMITTED TO THE TOWN OF PARKER FOR ACCEPTANCE WITH THE RIGHT-OF-WAY PERMIT USE APPLICATION. A PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PLAN FOR USE DURING CONSTRUCTION.
9. ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SAFETY OF WORKERS PROVIDED FOR AS REQUIRED BY THE MOST RECENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION."
10. COMPACTION OF ALL TRENCHES MUST BE ATTAINED AND COMPACTION TEST RESULTS SUBMITTED TO THE DEVELOPMENT REVIEW ENGINEER IN PRELIMINARY FORM PRIOR TO PAVING AND IN FINAL FORM PRIOR TO PROBATIONARY ACCEPTANCE.
11. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION. THE PLAN MAY BE MODIFIED AS FIELD CONDITIONS WARRANT WITH APPROVAL FROM THE TOWN OF PARKER PUBLIC WORKS DEPARTMENT.
12. THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN PROPER TRAFFIC CONTROL DEVICES UNTIL THE SITE IS OPEN TO TRAFFIC. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE TOWN OF PARKER PUBLIC WORKS DEPARTMENT FOR APPROVAL PRIOR TO CONSTRUCTION.
13. PLANS ARE APPROVED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE SHOWN ON THE TOWN OF PARKER SIGNATURE BLOCK. PLANS SHALL BE RESUBMITTED TO THE TOWN FOR APPROVAL AFTER ONE (1) YEAR. THE COST OF THE PLAN RE-REVIEW AND RE-ACCEPTANCE WILL BE CHARGED BACK TO THE DEVELOPER INCLUDING ALL TIME AND EXPENSES OF THE TOWN OF PARKER PUBLIC WORKS DEPARTMENT.
14. REPAIR OF ANY DAMAGE TO EXISTING IMPROVEMENTS OR LANDSCAPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
15. ALL DAMAGED EXISTING CURB, GUTTER, AND SIDEWALK SHALL BE REPAIRED PRIOR TO ACCEPTANCE OF COMPLETED IMPROVEMENTS.
16. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE STATE OF COLORADO PERMITTING PROCESS FOR "STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY." FOR INFORMATION, PLEASE CONTACT COLORADO DEPARTMENT OF HEALTH, WATER QUALITY CONTROL DIVISION, WQCD-PE-82, 4300 CHERRY DRIVE SOUTH, DENVER, COLORADO 80222-1530. ATTENTION: PERMITS AND ENFORCEMENT SECTION. PHONE: 303-692-3500.
17. IF DEWATERING IS REQUIRED, A STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT IS REQUIRED FOR DISCHARGES TO A STORM SEWER, CHANNEL, IRRIGATION DITCH, ANY STREET THAT IS TRIBUTARY TO THE AFOREMENTIONED FACILITIES, OR ANY WATER OF THE UNITED STATES.
18. ALL REFERENCES TO BOOKS, PAGES, MAPS, AND RECEPTION NUMBER ARE PUBLIC DOCUMENTS ON FILE WITH THE COUNTY CLERK AND RECORDER'S OFFICE.

**PARKER STANDARD STORM DRAINAGE INFRASTRUCTURE NOTES**

1. ALL STORM DRAINAGE IMPROVEMENTS ARE SUBJECT TO COMPLIANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, M & S STANDARDS, AND ALL STANDARD SPECIAL PROVISIONS CURRENTLY USED BY CDOT, WITH THE MODIFICATIONS SET FORTH IN THE TOWN OF PARKER'S STORM DRAINAGE AND ENVIRONMENT CRITERIA MANUAL (SDECM), AS AMENDED.
2. THE CONTRACTOR SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8 CRS), THE "PROTECTION OF FISHING STREAMS" TITLE 33, ARTICLE 5, CRS), THE "CLEAN WATER ACT" (33 USC 1344), "CHERRY CREEK RESERVOIR CONTROL REGULATION NO. 72" (5 CCR 1002-72), THE REGULATION PROMULGATED, CERTIFICATION OR PERMITS ISSUES, AND THE REQUIREMENTS PRESENTED IN THE SDECM REVISION TO SECTION 107 AND THE CONSTRUCTION BMP PLAN. IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND WATER QUALITY CONTROL LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
3. INSPECTIONS: CONSTRUCTION SHALL NOT BEGIN UNTIL A GRADING PERMIT HAS BEEN ISSUED FOR THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE TOWN OF PARKER ENGINEERING DEPARTMENT (PUBLIC WORKS) TO SCHEDULE INSPECTIONS A MINIMUM OF 48 HOURS PRIOR TO THE CONSTRUCTION OF ALL DRAINAGE INFRASTRUCTURE (STORM SEWERS, INLETS, MANHOLES, ENERGY DISSIPATORS, RIPRAP, GROUDED BOULDERS, DETENTION POND OUTLET STRUCTURES, FOREBAYS, TRICKLE CHANNELS, ETC.). FAILURE TO NOTIFY THE ENGINEERING DEPARTMENT FOR INSPECTIONS MAY RESULT IN NON-ACCEPTANCE OF THE INFRASTRUCTURE BY THE TOWN. URBAN DRAINAGE AND FLOOD CONTROL DISTRICT MUST ALSO BE NOTIFIED IN A SIMILAR MANNER FOR ALL MAINTENANCE ELIGIBLE DRAINAGE INFRASTRUCTURES (CONSULT WITH STORMWATER ENGINEERING DIVISION).

4. STRUCTURAL BACKFILL (CDOT CLASS 1) SHALL BE COMPACTED TO CDOT STANDARD SPECIFICATIONS 203.03. STRUCTURAL BACKFILL (CDOT CLASS 2) SHALL CONFORM TO CDOT STANDARD SPECIFICATION 203.07. AT THE CONTRACTOR'S OPTION, STRUCTURAL BACKFILL (SQUEEGEE) MEETING THE GRADATION REQUIREMENTS CONTAINED IN REVISION OF SECTION 206 OF THE CDOT STANDARD SPECIFICATIONS AS PRESENTED IN THE SDECM, MAY BE SUBSTITUTED FOR STRUCTURE BACKFILL (CLASS 1 OR CLASS 2) FOR BACKFILLING OF CULVERT PIPES, STORM SEWER PIPES, MANHOLES AND INLET STRUCTURES; HOWEVER, THE TOP 2 FEET BELOW SUB-GRADE ELEVATION SHALL BE THE REQUIRED EMBANKMENT MATERIAL.
5. ALL EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.
6. TESTING: PROBATIONARY ACCEPTANCE OF STORM DRAINAGE IMPROVEMENTS WILL BE CONTINGENT UPON SATISFACTORY TESTING RESULTS. IN ALL CASES WHERE TESTS INDICATE COMPACTION LESS THAN THAT REQUIRED BY TOWN SPECIFICATIONS, ADDITIONAL COMPACTION AND TESTS WILL BE REQUIRED UNTIL THE SPECIFICATIONS ARE MET. FREQUENCY OF TESTING WILL BE AS FOLLOWS:  
A) 1 TEST FOR SUB-GRADE AND 1 TEST FOR BACKFILL AT EVERY ABOVE-GROUND APPURTENANCE (MANHOLES, INLETS, ETC.)  
B) 1 TEST EVERY 200 LF OF MAINLINE TRENCHES EVERY 1-FOOT OF BACKFILL LIFT AND WITHIN 1 FOOT FROM ALL STRUCTURES.

7. ALLOWABLE STORM SEWER CONDUIT MATERIAL WITHIN THE TOWN OF PARKER SHALL BE LIMITED TO REINFORCED CONCRETE PIPE (RCP) CONFORMING TO CDOT STANDARD SPECIFICATION 706.02.
8. ALL RCP JOINTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C443. RUBBER GASKETS SHALL BE USED ON ALL PIPE JOINTS CONFORMING TO ASTM C443. ALL RCP SECTIONS SHALL BE JOINTED IN SUCH A MANNER THAT THE ENDS ARE FULLY ENTERED AND THE INNER SURFACES ARE REASONABLY FLUSH. AVERAGE JOINT GAP THAT EXCEEDS 1/8 INCH SHALL BE FILLED WITH AN APPROVED FLEXIBLE PLASTIC SEALANT.
9. JOINT RESTRAINTS AND TOE-WALLS CONFORMING TO CDOT M&S STANDARD PLAN NO. M-601-11 SHALL BE USED ON ALL RCP FLARED END SECTION OUTFALLS.
10. EPOXY COATED REBAR SHALL BE USED AS REINFORCING STEEL ON ALL STORM INLETS. REFERENCE CDOT M&S STANDARD NO. M-604-10, 11, 12, AND 13.
11. CDOT CLASS D CONCRETE SHALL BE USED FOR ALL CONCRETE DRAINAGE STRUCTURES.
12. PRE-CAST INLETS AND MANHOLE BASES SHALL NOT BE USED WITHIN THE TOWN OF PARKER RIGHT-OF-WAY, WITH THE EXCEPTION OF CDOT TYPE C AND D INLETS.
13. TWO (2) MANHOLE ACCESS JOINTS ARE REQUIRED ON ALL TYPE "R" CURB INLETS GREATER THAN OR EQUAL TO TEN (10) FEET IN LENGTH AS PRESENTED IN CDOT M&S STANDARD PLAN NO. M-604-12.
14. ALL GROUTING (BOULDERS, RIPRAP) SHALL BE IN ACCORDANCE WITH THE REVISION OF SECTION 506 OF THE CDOT STANDARD SPECIFICATIONS AS PRESENTED IN THE SDECM.
15. ALL BOULDERS AND RIPRAP SHALL BE SELECTED AND PLACED IN ACCORDANCE WITH THE REVISION OF SECTION 506 OF THE CDOT STANDARD SPECIFICATIONS AS PRESENTED IN THE SDECM.
16. CONTRACTOR SHALL REFER TO THE TOWN OF PARKER'S CONSTRUCTION BEST MANAGEMENT PRACTICES DETAILS AND NOTES FOR ALL REQUIREMENTS RELATING TO RE-VEGETATION, SEDIMENT AND EROSION CONTROL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES.

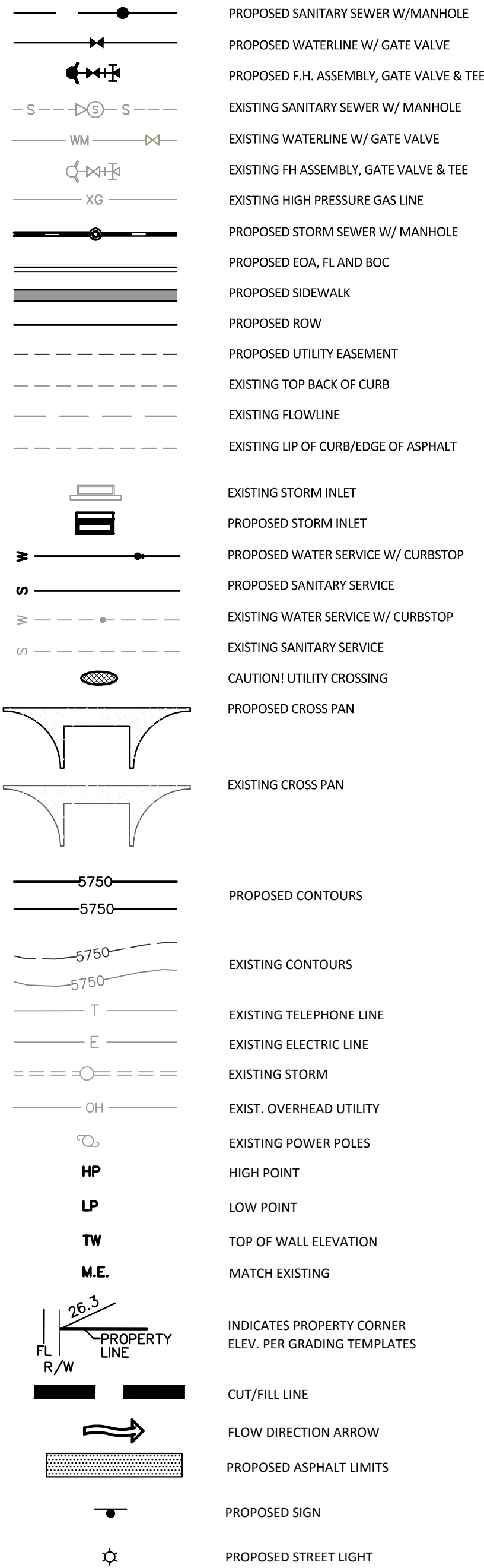
**SIGNAGE & STRIPING NOTES**

1. SEE SIGNAGE & STRIPING PLAN FOR NOTES.

**ROADWAY NOTES:**

1. PAVING SHALL NOT COMMENCE UNTIL A SOILS REPORT AND PAVEMENT DESIGN IS APPROVED BY THE ENGINEERING DIVISION AND SUB-GRADE COMPACTION TESTS ARE SUBMITTED TO AND APPROVED BY THE DEVELOPMENT REVIEW ENGINEER.
2. STANDARD TOWN OF PARKER HANDICAP RAMPS ARE TO BE CONSTRUCTED AT ALL CURB RETURNS AND AT ALL "T" INTERSECTIONS.
3. ALL STATIONING IS BASED ON CENTERLINE OF ROADWAYS UNLESS OTHERWISE NOTED.
4. ALL ELEVATIONS ARE ON USGS DATUM WITH DATE. RANGE POINT OR MONUMENT SHALL BE SHOWN ON THE CONSTRUCTION PLANS.
5. EXCEPT WHERE OTHERWISE PROVIDED FOR IN THESE PLANS AND SPECIFICATIONS, THE COLORADO DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE COLORADO DEPARTMENT OF HIGHWAYS M-STANDARDS, AND THE TOWN OF PARKER ROADWAY DESIGN AND CONSTRUCTION CRITERIA MANUAL, LATEST EDITION, SHALL APPLY.

**MASTER LEGEND**



Know what's below.  
Call before you dig.

**TOWN OF PARKER APPROVALS**

THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWNS STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATION. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.

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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE

DATE	11/2015	1ST SUBMITTAL	EG
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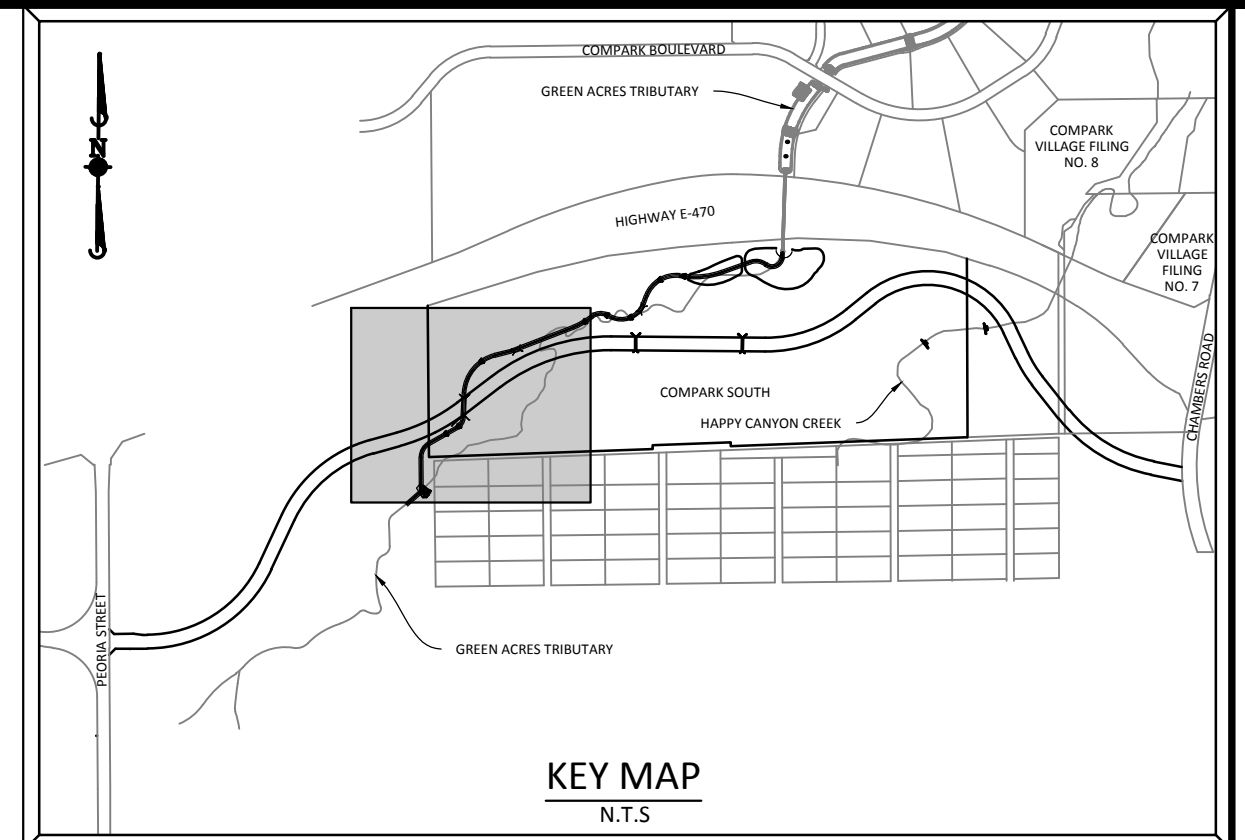
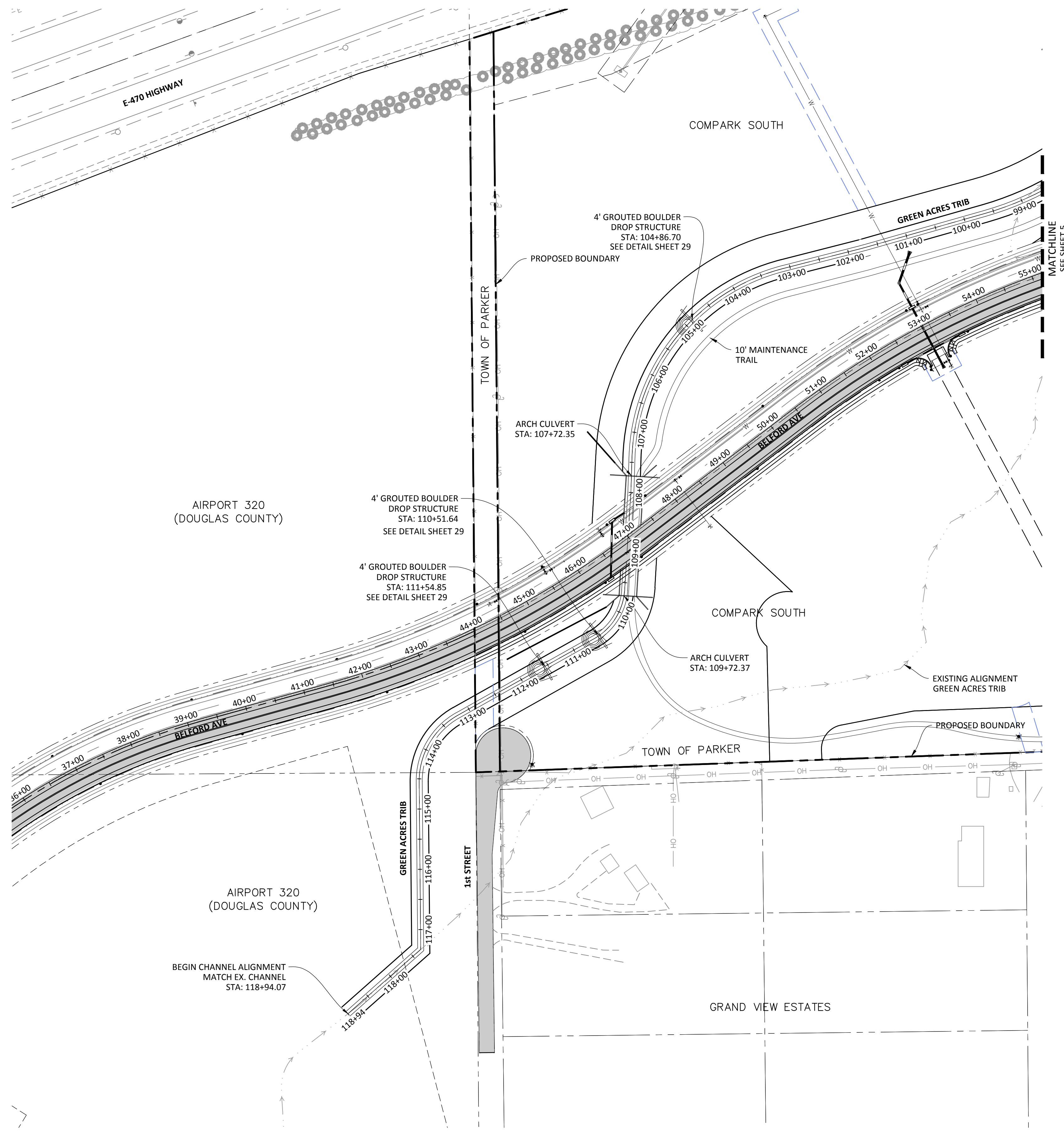
**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**GENERAL NOTES**

PROJ. MGR.: RLB
PROJ. ASSOC.: ASD
DRAWN BY: ETG
DATE: 11/2015
<b>SHEET</b>
<b>2 OF 31</b>
CLCPK3

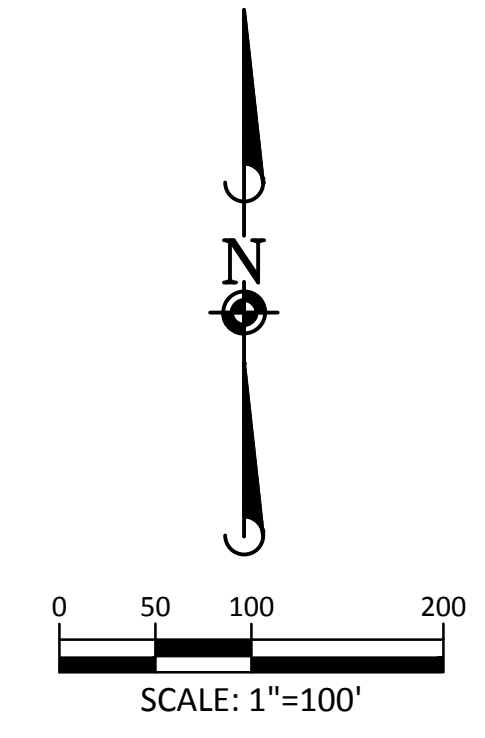








**SOURCE BENCHMARKS:**  
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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE

DATE	11/2015	1ST SUBMITTAL	EG
REVISIONS			
DRAWN BY			

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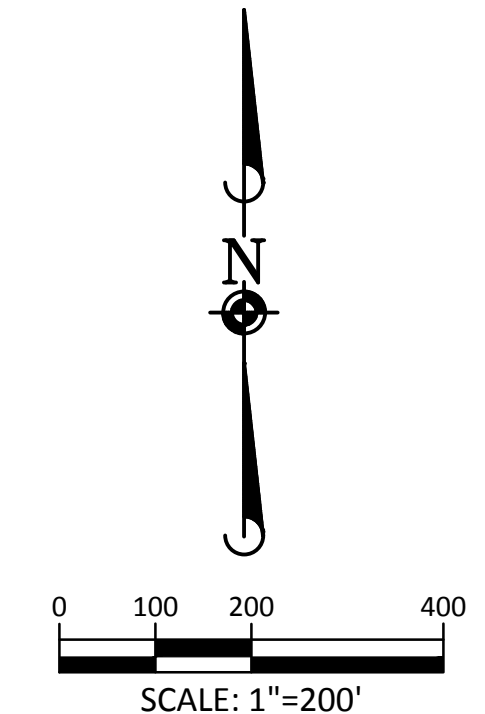
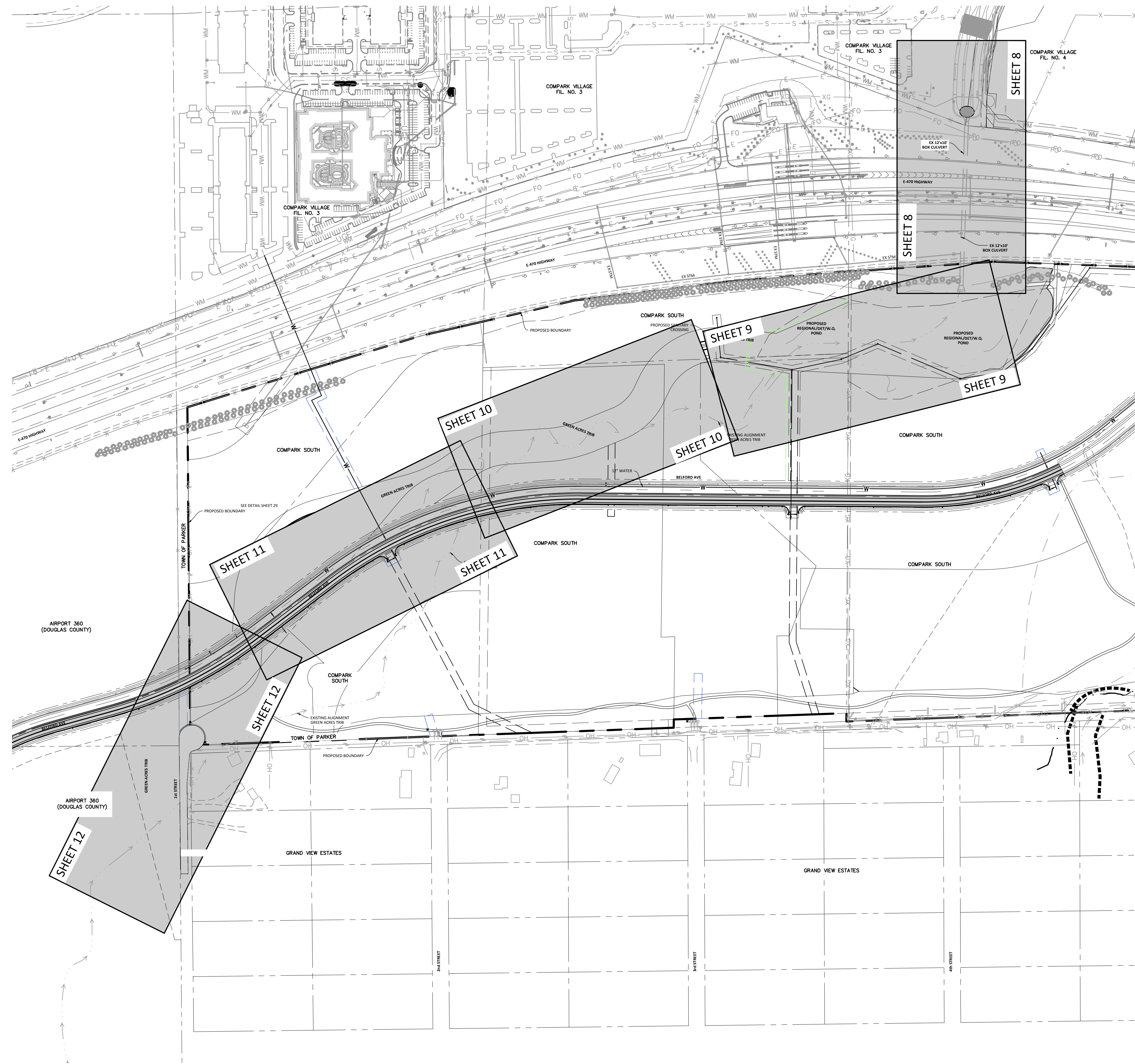
**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**CHANNEL ALIGNMENT PLAN**

PROJ. MGR.:	RLB
PROJ. ASSOC.:	ASD
DRAWN BY:	ETG
DATE:	11/2015
<b>SHEET</b>	
<b>6 OF 31</b>	
CLCPKC3	

Plotted: 12/16/2015 9:13 AM, Day: Name: P:\Crank3\CompSouth\GreenAcresTrib.dwg (Email: Drawings) (Plot: Svt) (Town: CLCPKC3) (Drainage: ChannelAlignment.dwg) (Updated By: jrdrocker)

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PENDING APPROVAL



**TOWN OF PARKER APPROVALS**

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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE

Plotted: 12/16/2015 9:15 AM. Draw Name: P:\Projects\3\Compark\3\Compark\Drawings\Plan Set\Town\CLCPKC3\Drawings\Index.dwg. Updated By: dkatz

DATE	REVISIONS
11/2015	1ST SUBMITTAL

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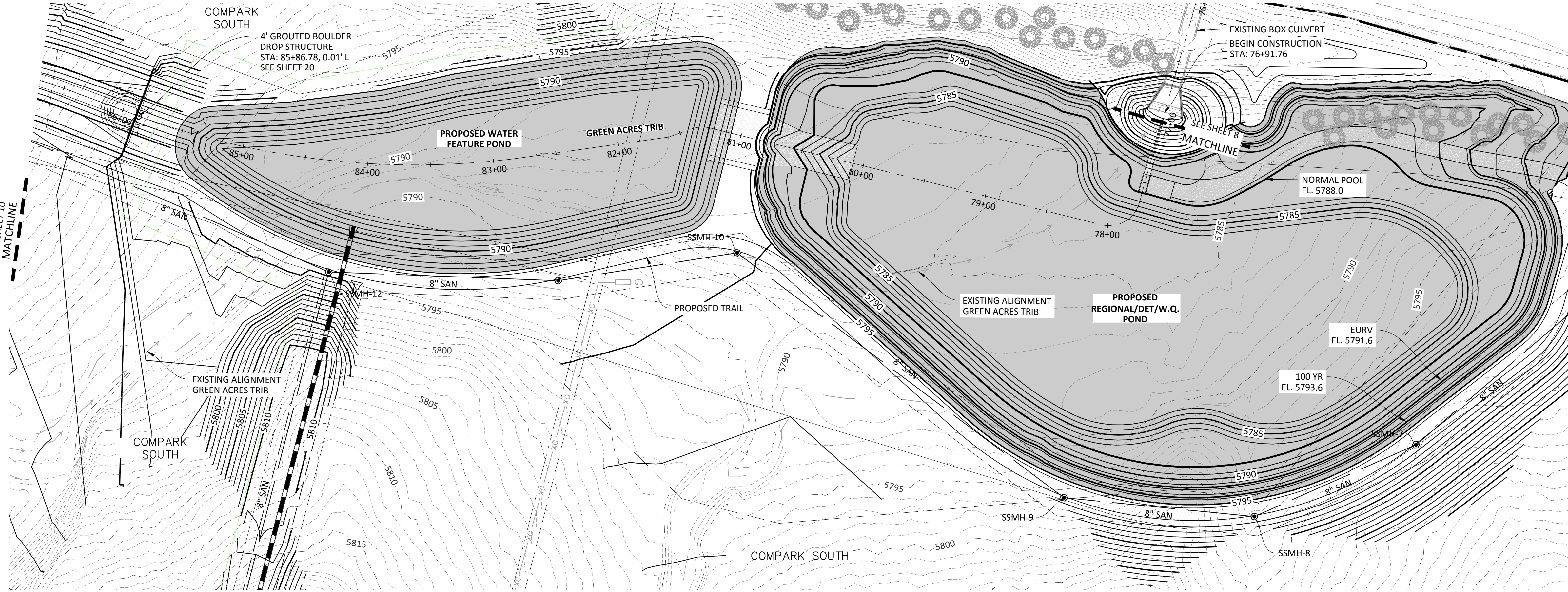
**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**SHEET INDEX**

PROJ. MGR.: RLB
PROJ. ASSOC.: ASD
DRAWN BY: ETG
DATE: 11/2015
<b>SHEET</b>
<b>7 OF 31</b>
CLCPKC3

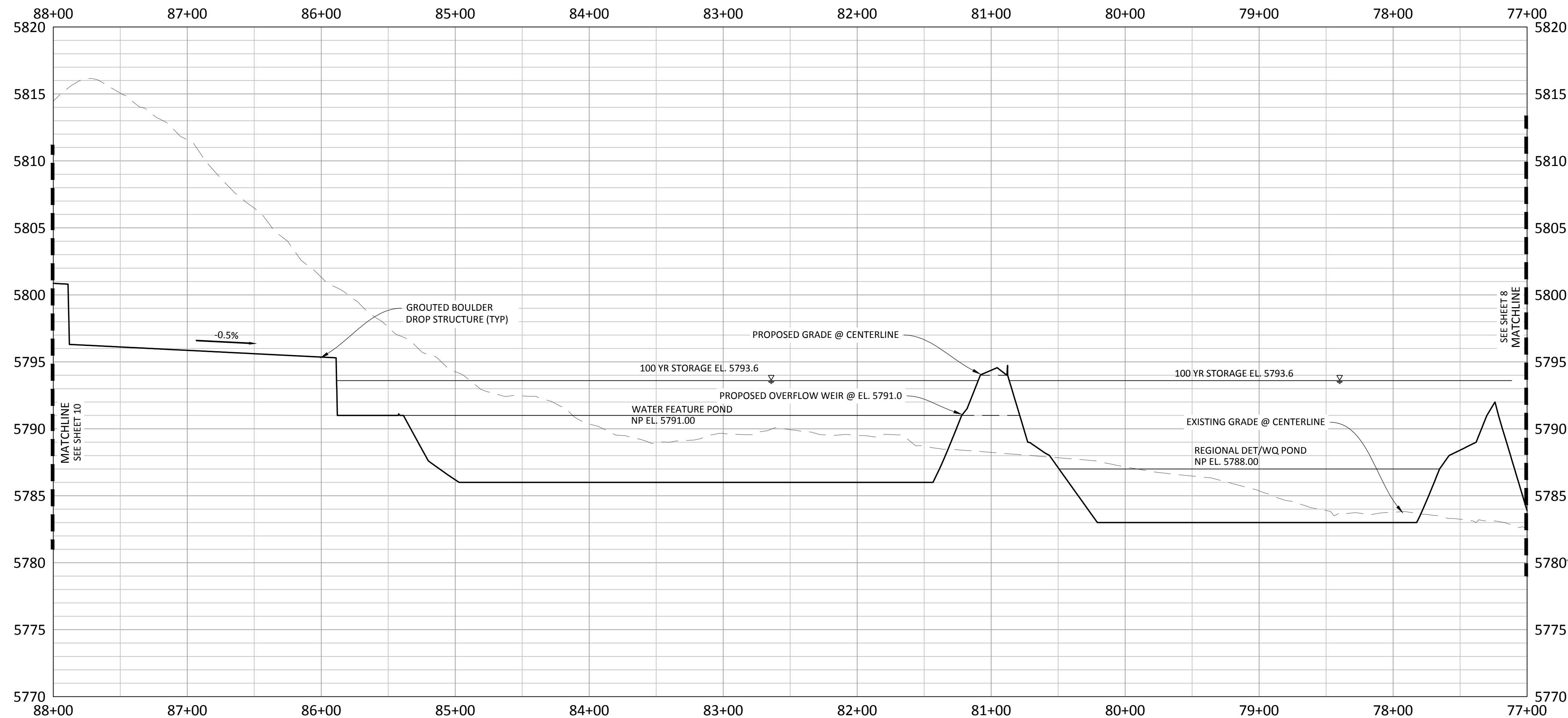
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PENDING APPROVAL

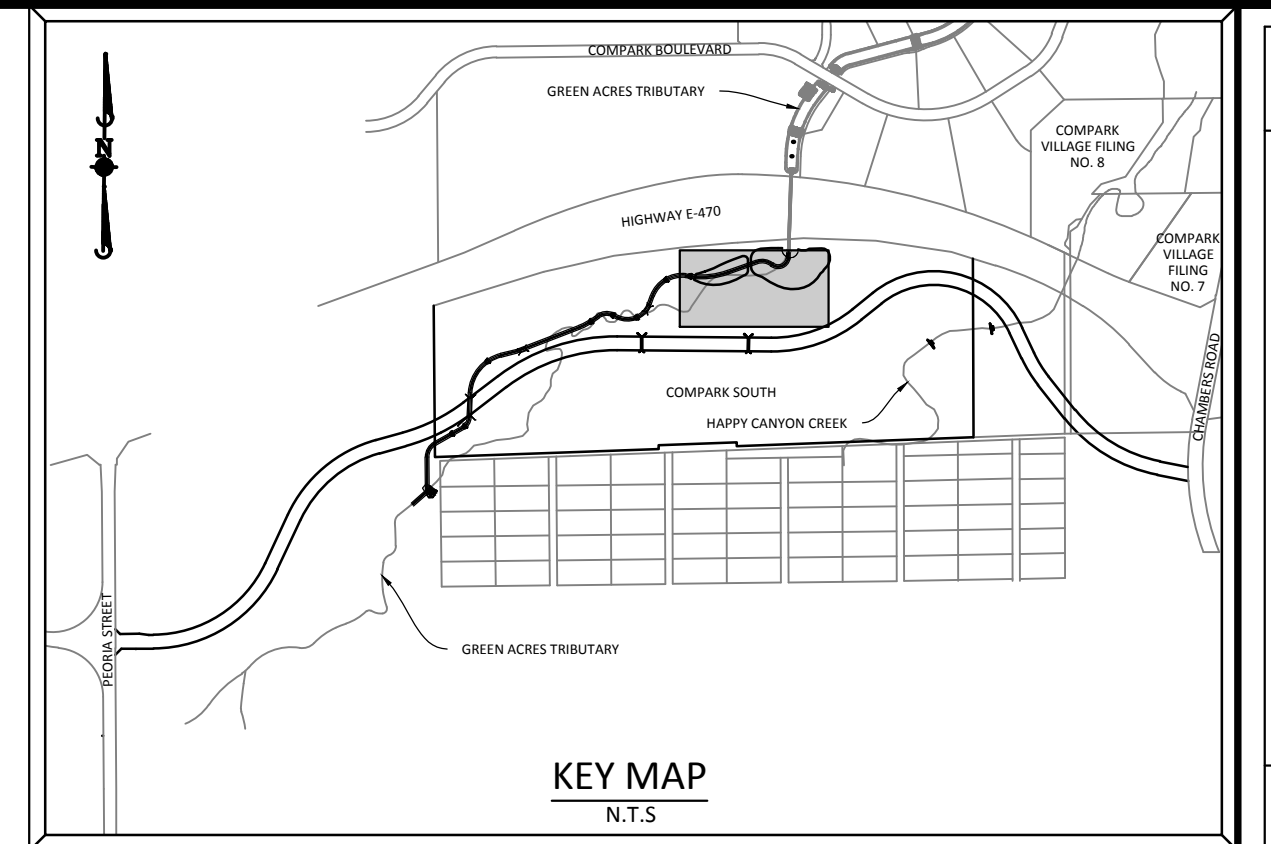




PLAN: DRAINAGE CHANNEL

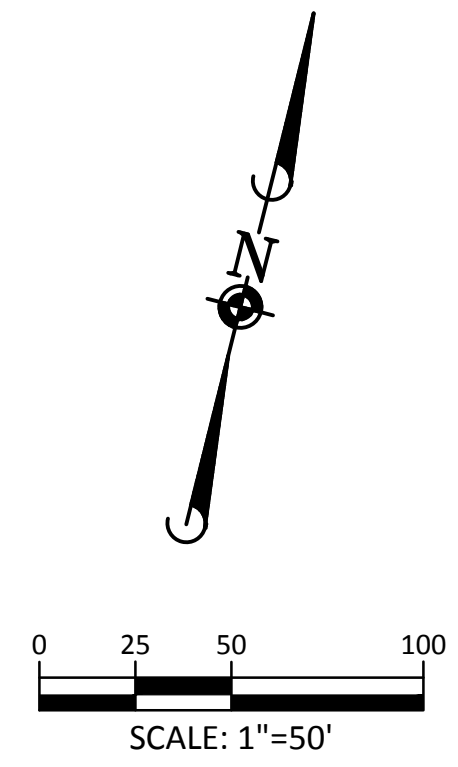


PROFILE: DRAINAGE CHANNEL



SOURCE BENCHMARKS:

DOUGLAS COUNTY BM 1.115010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE

DATE	REVISIONS	BY	EG

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COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY  
 TOWN OF PARKER, COLORADO  
 DRAINAGE PLAN & PROFILE

PROJ. MGR.: RLB  
 PROJ. ASSOC.: ASD  
 DRAWN BY: ETG  
 DATE: 11/2015

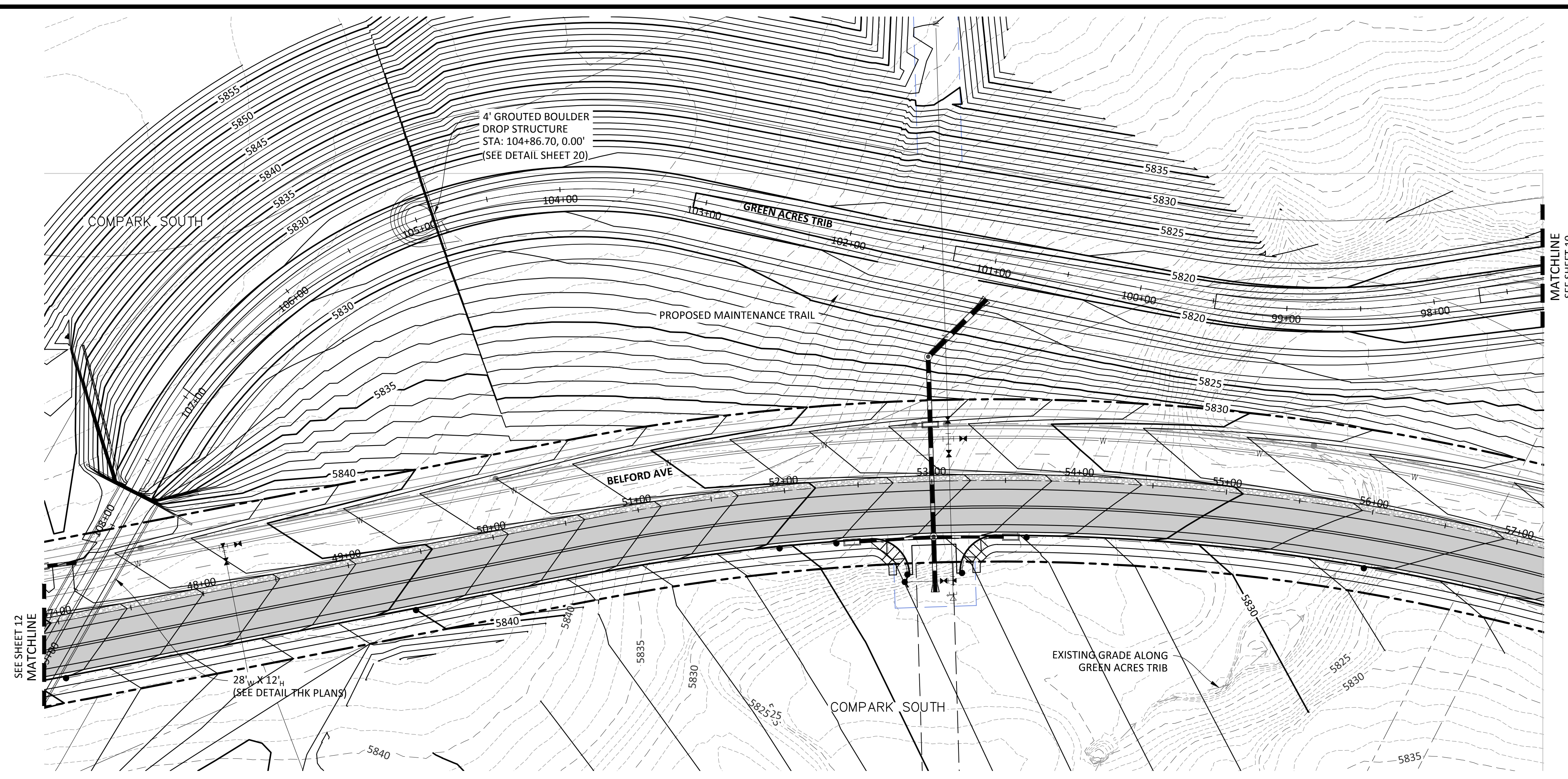
SHEET  
**9 OF 31**  
 CLCPKC3

Project: 12/12/2015 9:18 AM, Day: Name: P:\Projects\3\Compark\3\Compark\3\GreenAcres\Trib\Drawn\Drawings\Plan\San\Drawings\Drainage\REP - 12.dwg, Updated By: adrucker

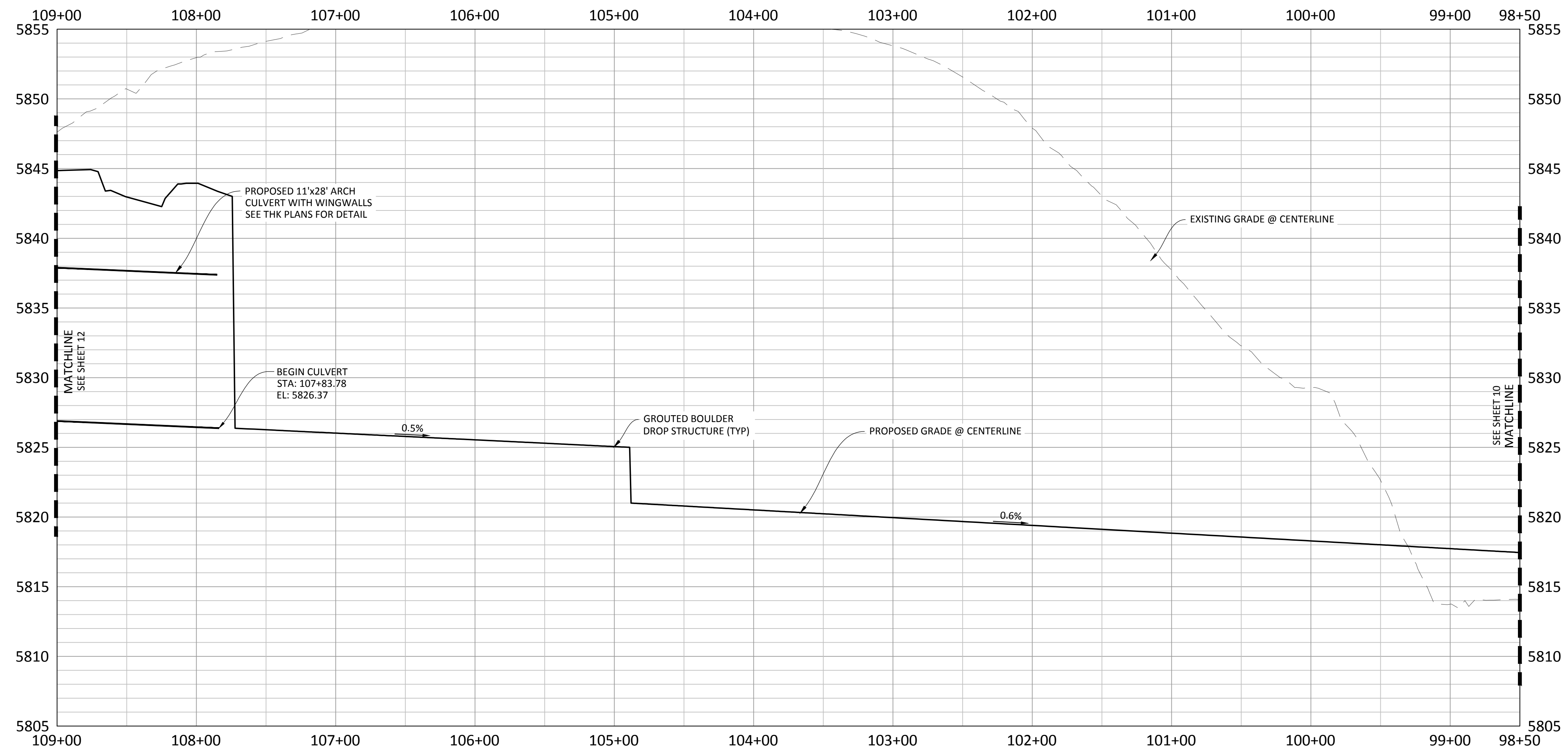
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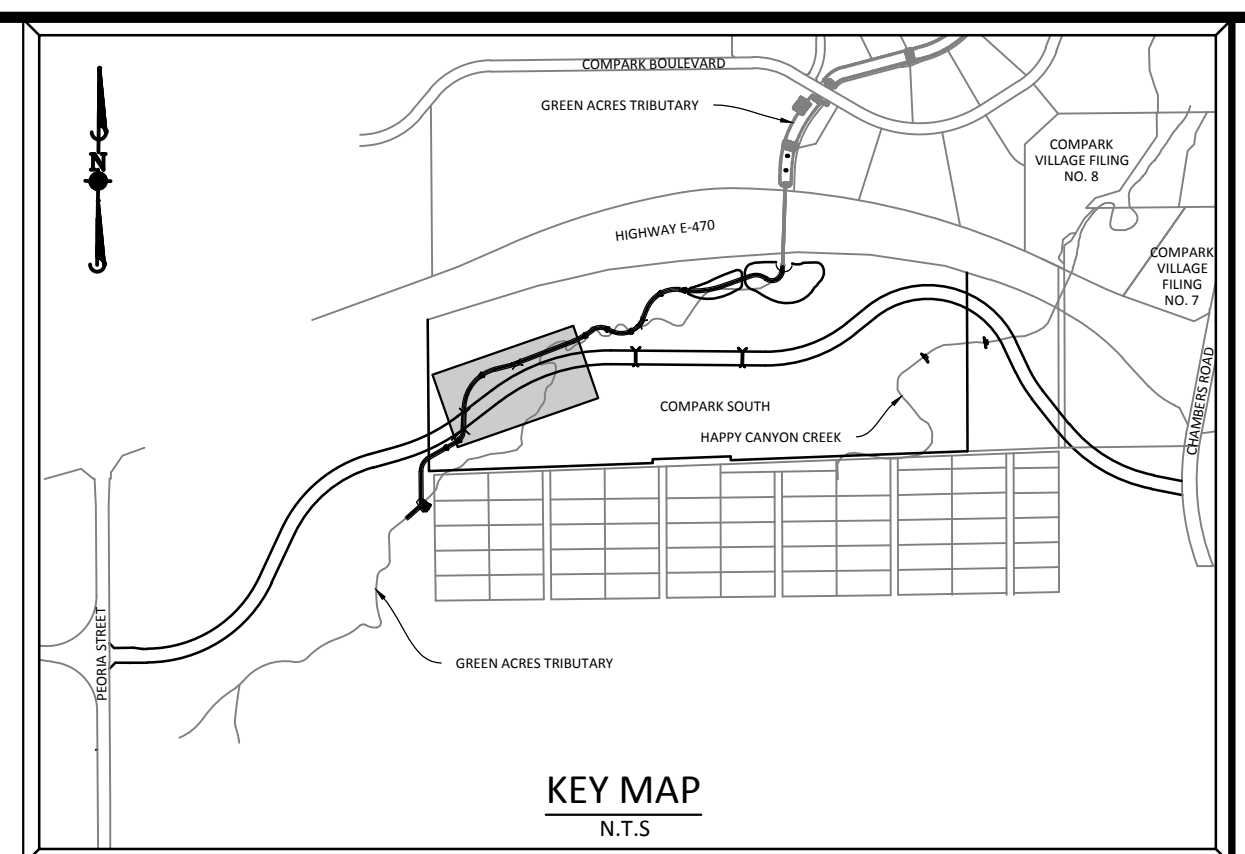




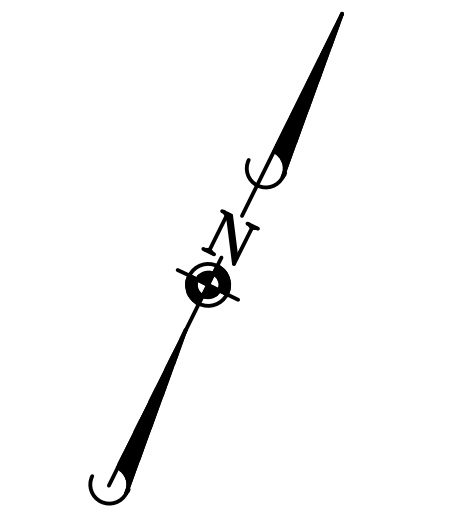
PLAN: DRAINAGE CHANNEL



PROFILE: DRAINAGE CHANNEL



**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 1.115010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



0 25 50 100  
 SCALE: 1"=50'



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TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE

DATE	REVISIONS	BY	CHK	APP

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**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**DRAINAGE PLAN & PROFILE**

PROJ. MGR.: RLB  
 PROJ. ASSOC.: ASD  
 DRAWN BY: ETG  
 DATE: 11/2015

SHEET  
**11 OF 31**  
 CLCPKC3

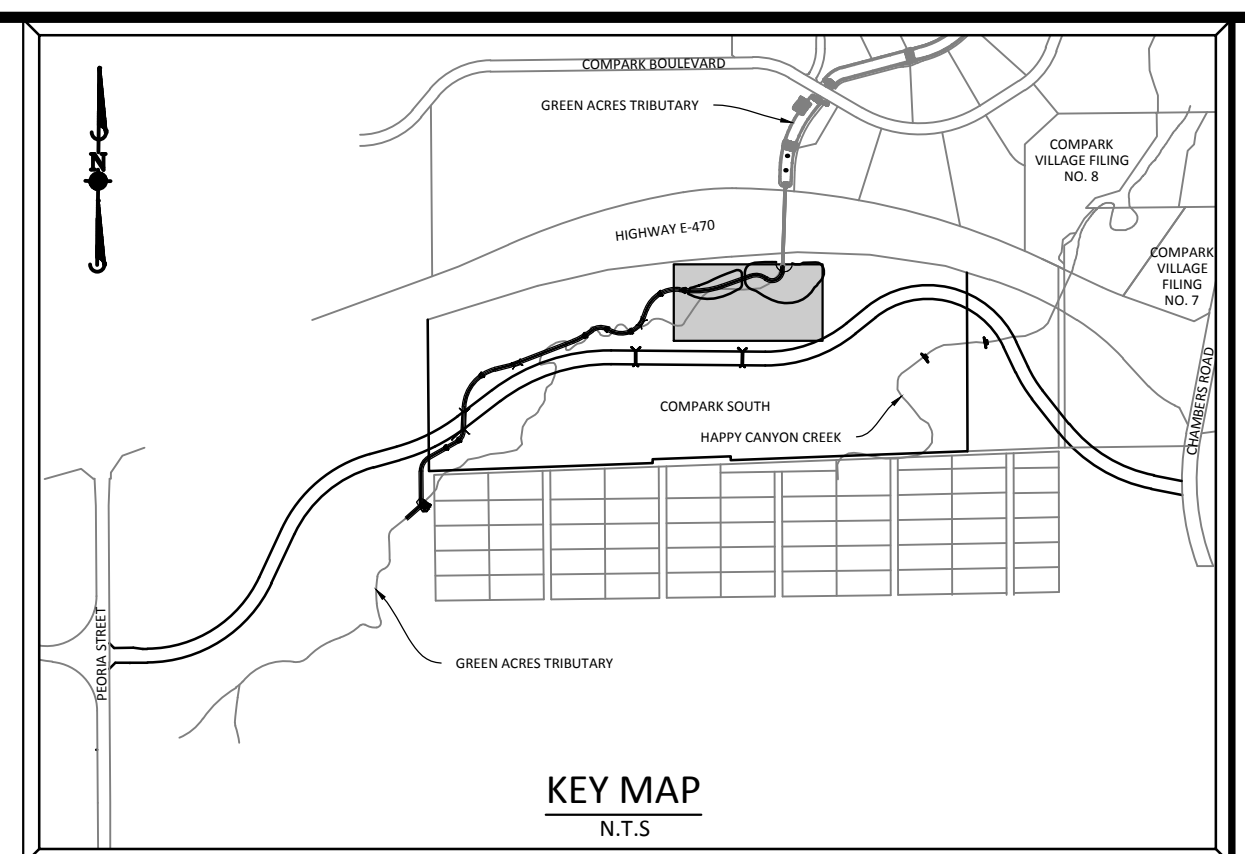
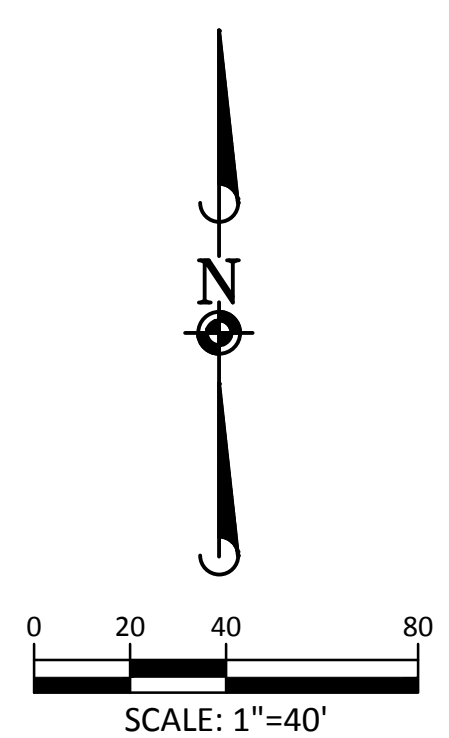
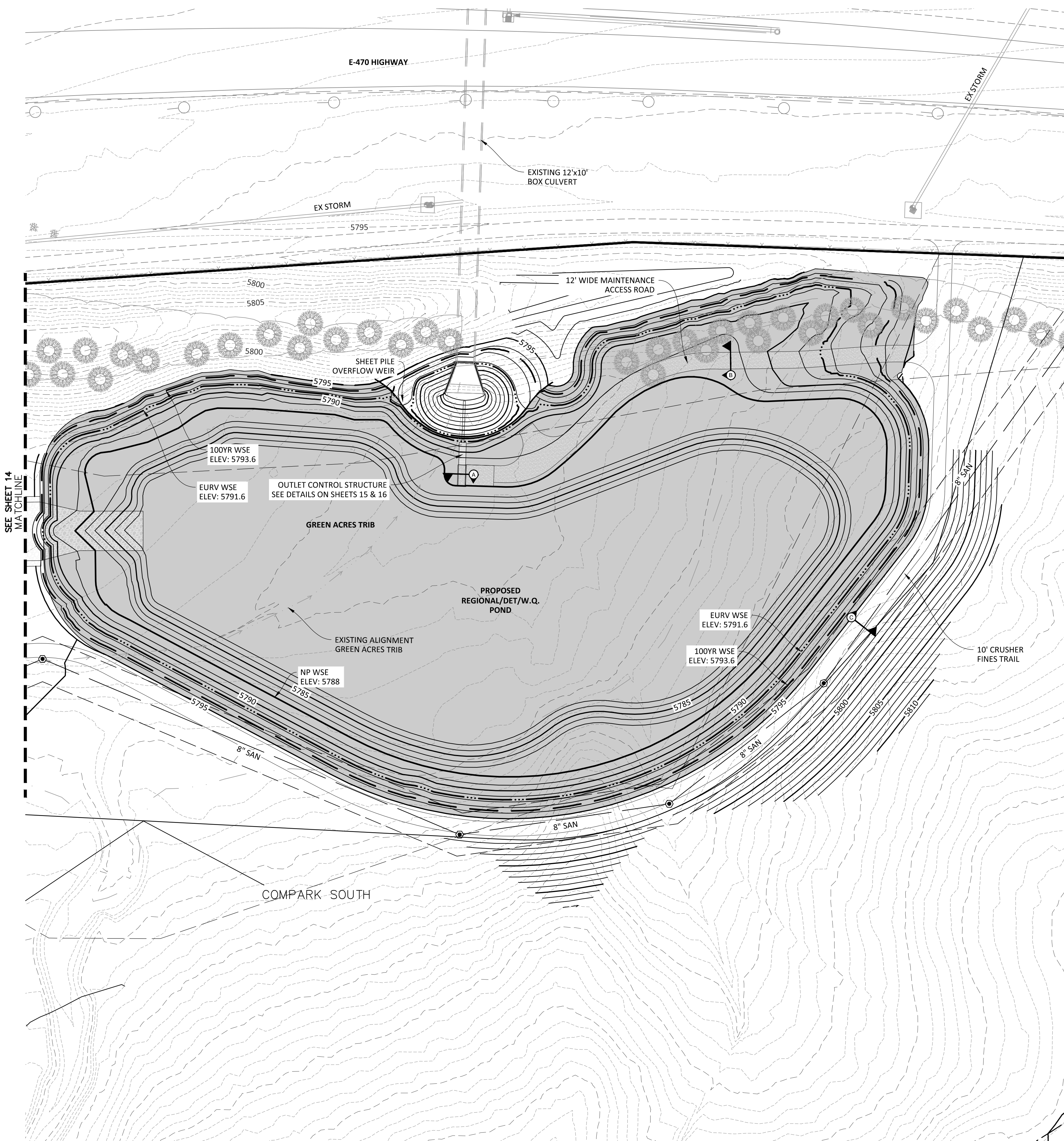
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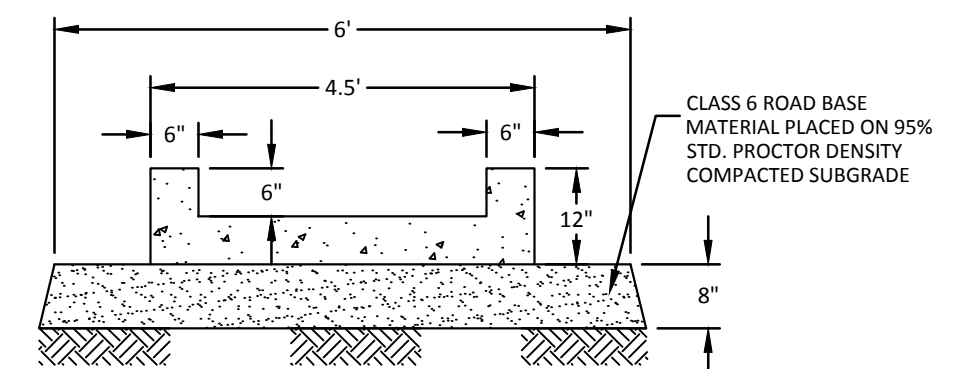
PENDING APPROVAL



Plot: 12/16/2015 9:24 AM, Draw Name: P:\Projects\3\Compark\3\Compark\Drawings\Plan\Site\Town\CLCPK3\Drawings\Pond Plan.dwg, Updated By: aduckler

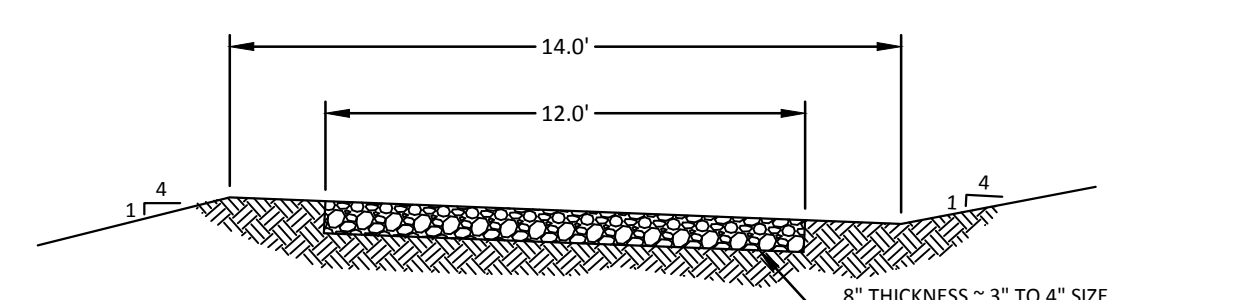


**SOURCE BENCHMARKS:**  
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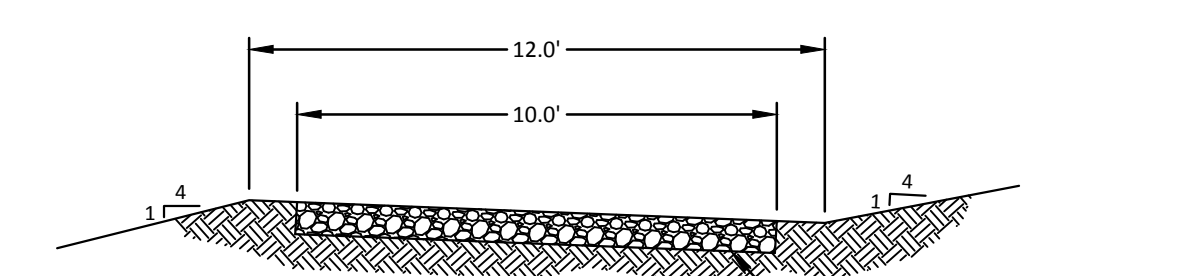


**SECTION A**  
 4.5' WIDE TRICKLE CHANNEL  
 $\frac{1}{2}'' = 1'-0''$

NOTE: USE 4 POUNDS PER CU. YD. OR FIBRE MESH TO REINFORCE CONCRETE



**SECTION B**  
 MAINTENANCE ACCESS ROAD  
 $\frac{1}{4}'' = 1'-0''$



**SECTION C**  
 CRUSHER FINES TRAIL  
 $\frac{1}{4}'' = 1'-0''$

	VOLUME	WSE	DISCHARGE
100 YR	18 AC-FT	5793.6	652.66 CFS
EURV	11 AC-FT	5791.6	3.32 CFS

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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE



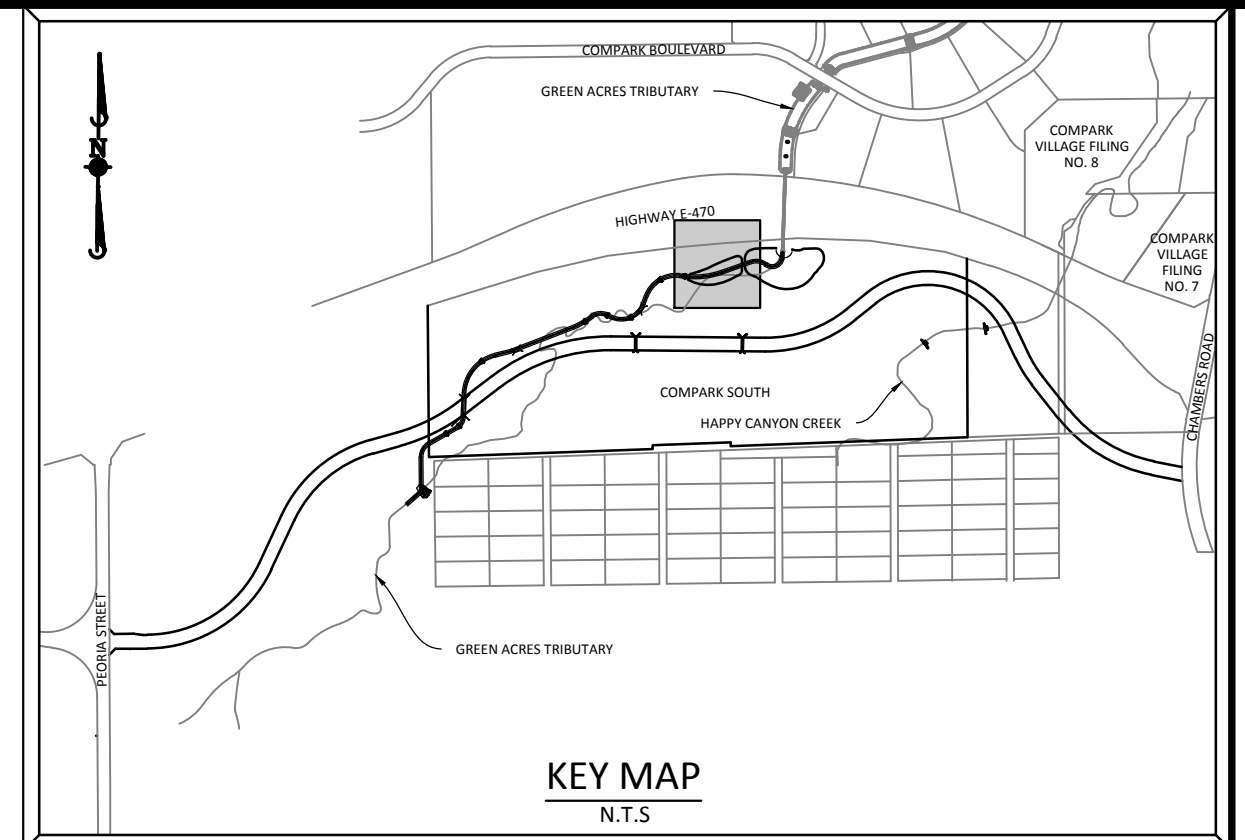
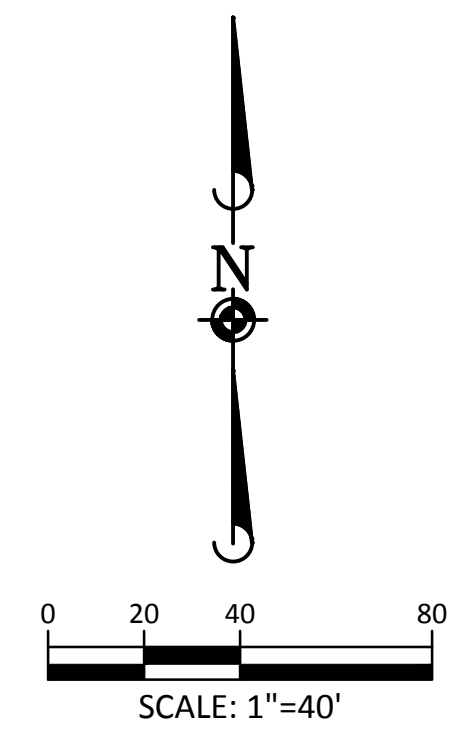
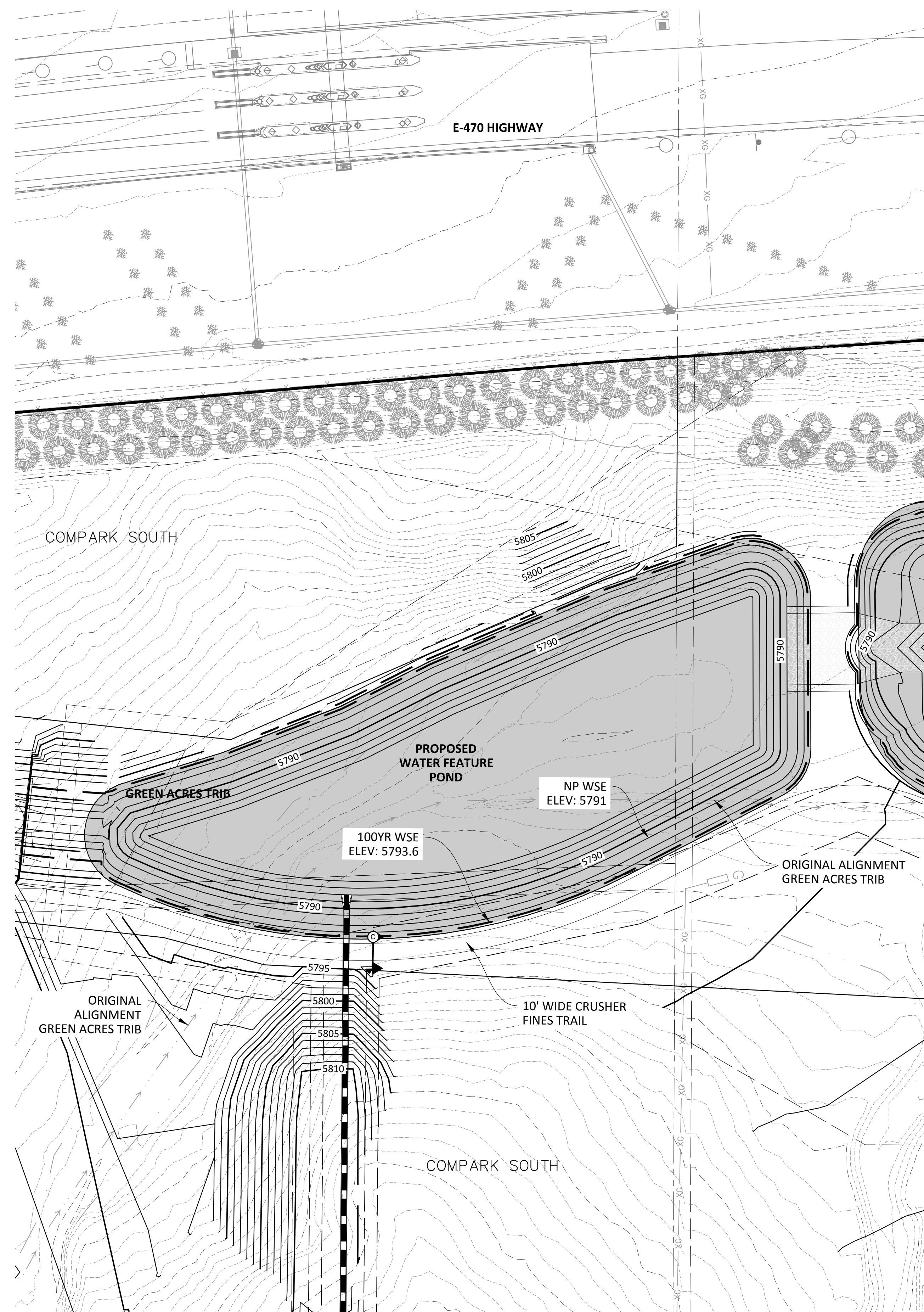
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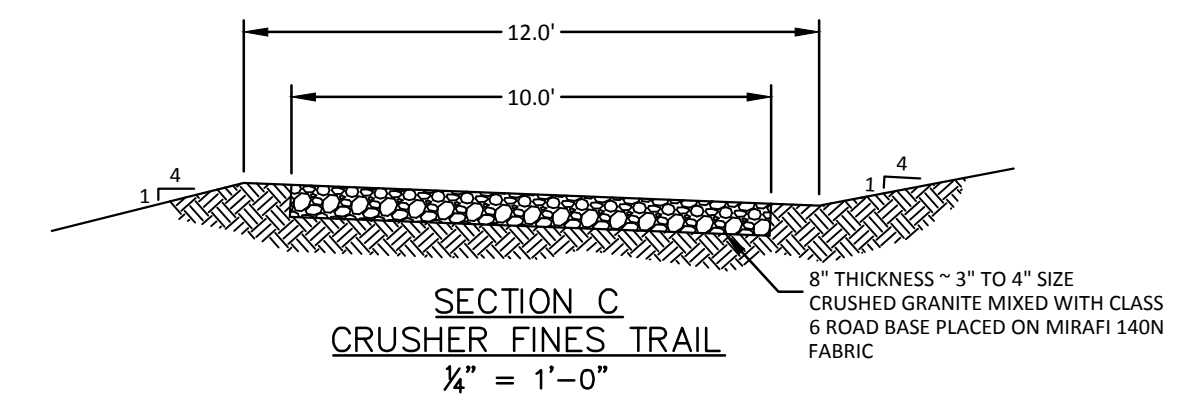
**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**DETENTION POND PLAN**

PROJ. MGR.: RLB
PROJ. ASSOC.: ASD
DRAWN BY: ETG
DATE: 11/2015
<b>SHEET</b>
<b>13 OF 31</b>
CLCPK3

PENDING APPROVAL



**SOURCE BENCHMARKS:**  
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TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE



DATE	11/2015	1ST SUBMITTAL
REVISIONS		
DRAWN BY		EG

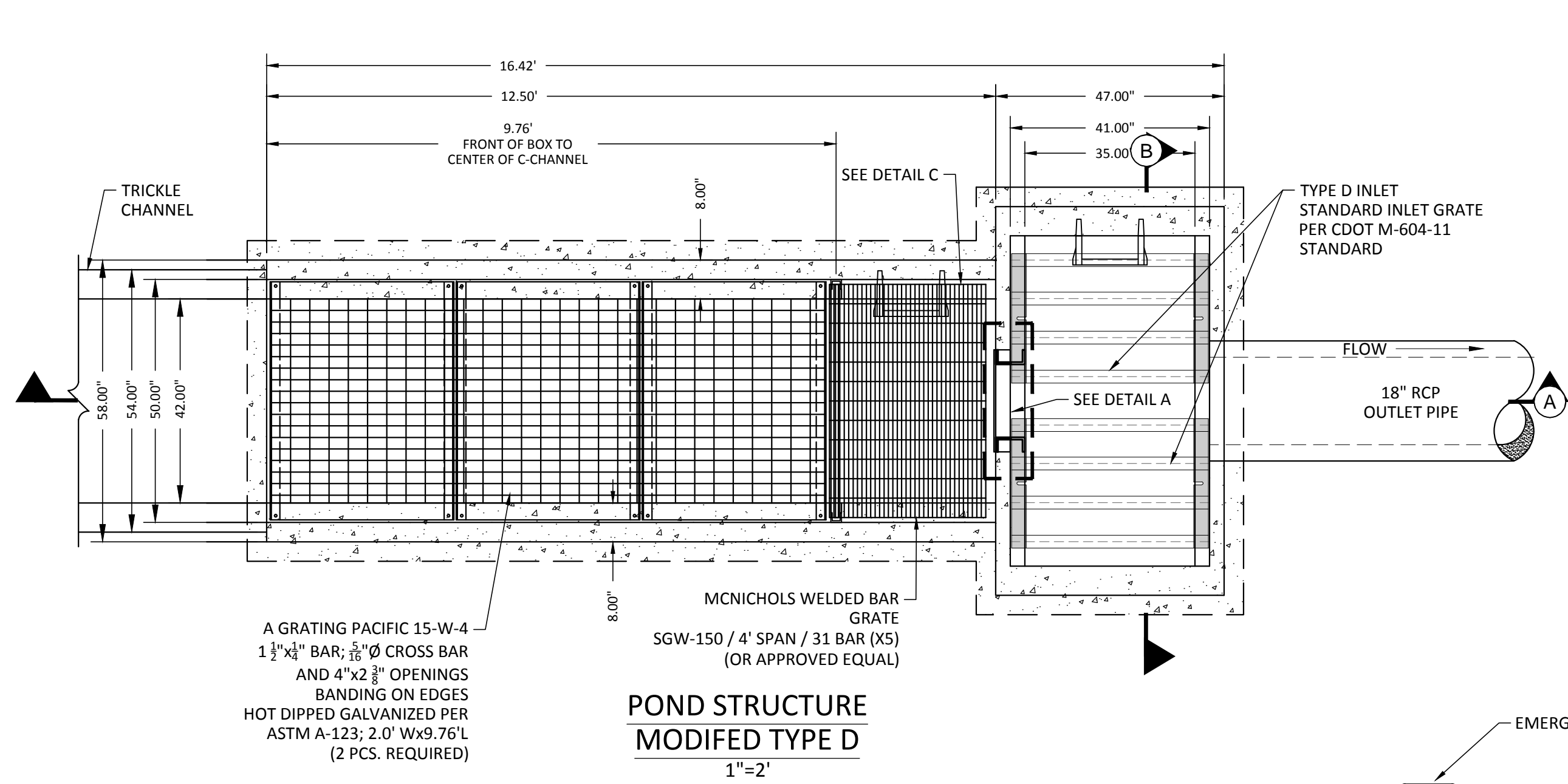
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**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**DETENTION POND PLAN**

PROJ. MGR.: RLB
PROJ. ASSOC.: ASD
DRAWN BY: ETG
DATE: 11/2015
<b>SHEET</b>
<b>14 OF 31</b>
CLCPKC3

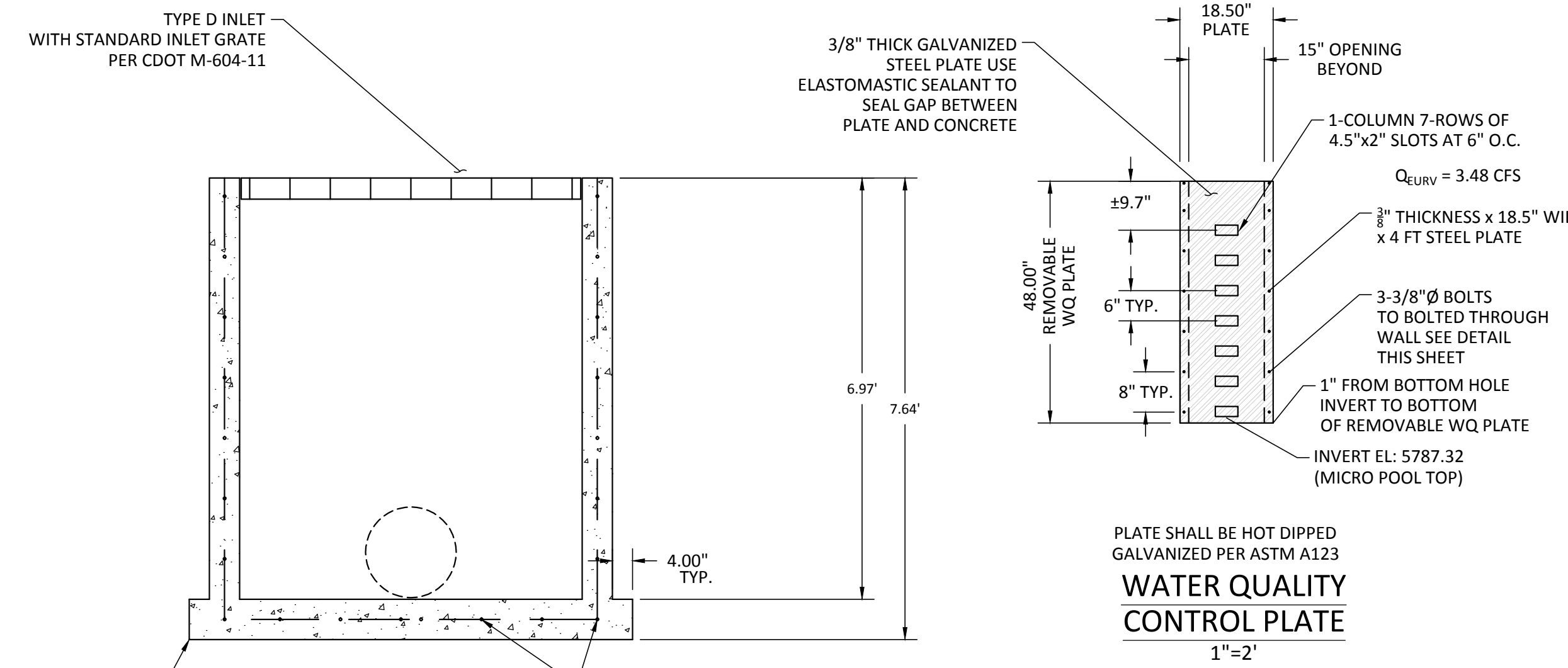
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**POND STRUCTURE  
MODIFIED TYPE D**  
1"=2'

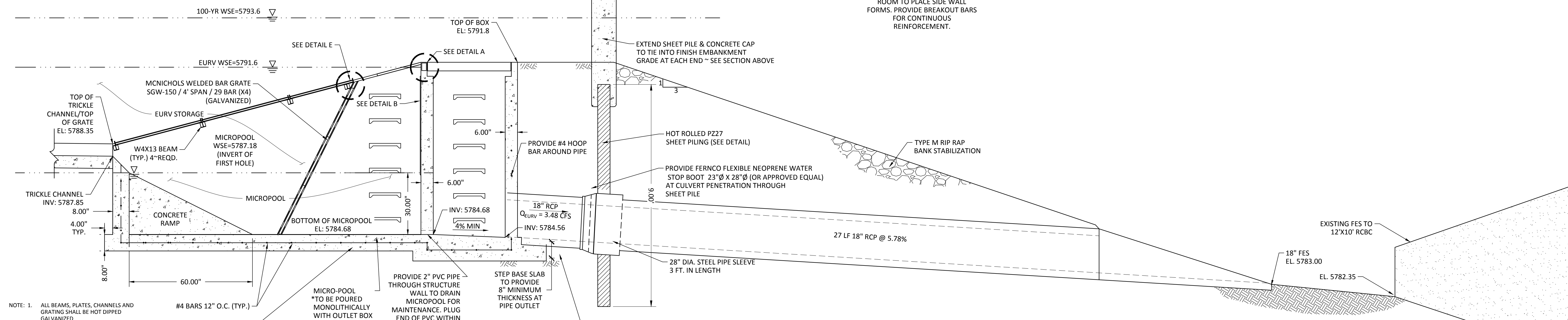
- NOTES:
1. REFER TO CDOT M-604-11 STANDARD, TYPE "D" INLET FOR CONCRETE, STEEL GRATE AND STEP REQUIREMENTS. REINFORCING BARS SHALL BE PLACED IN ALL INTERIOR, EXTERIOR AND BASE WALLS.
  2. STEPS SHALL BE PROVIDED, AS SHOWN ON DETAIL AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
  3. GRATES SHALL BE STANDARD GRATE TYPE.
  4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
  5. CONTRACTOR TO HAVE PROFESSIONAL ENGINEER DESIGN AND CERTIFY THE OUTLET STRUCTURE.



**SECTION B**  
1"=2'

PLATE SHALL BE HOT DIPPED GALVANIZED PER ASTM A123  
**WATER QUALITY CONTROL PLATE**  
1"=2'

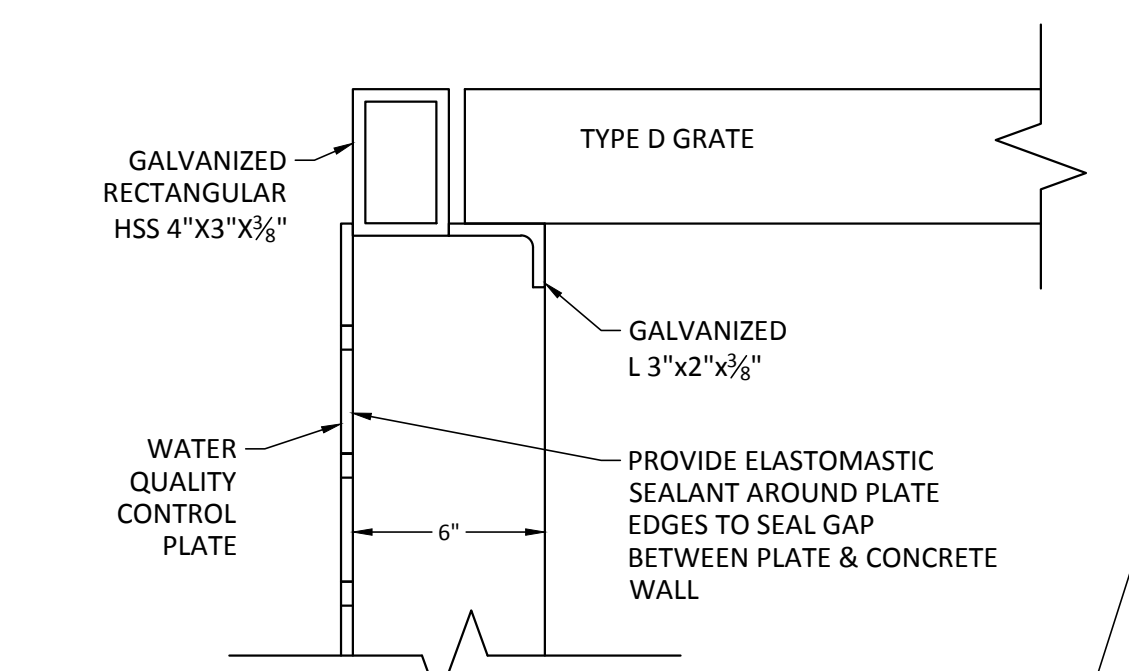
NOTE: THE BASE SLAB SHOULD BE EXTENDED 4 INCHES BEYOND EDGE OF STRUCTURE SHOULD CONTRACTOR ELECT TO POUR THE BASE ONLY. THIS WILL ALLOW ROOM TO PLACE SIDE WALL FORMS. PROVIDE BREAKOUT BARS FOR CONTINUOUS REINFORCEMENT.



**SECTION A**  
1"=2'

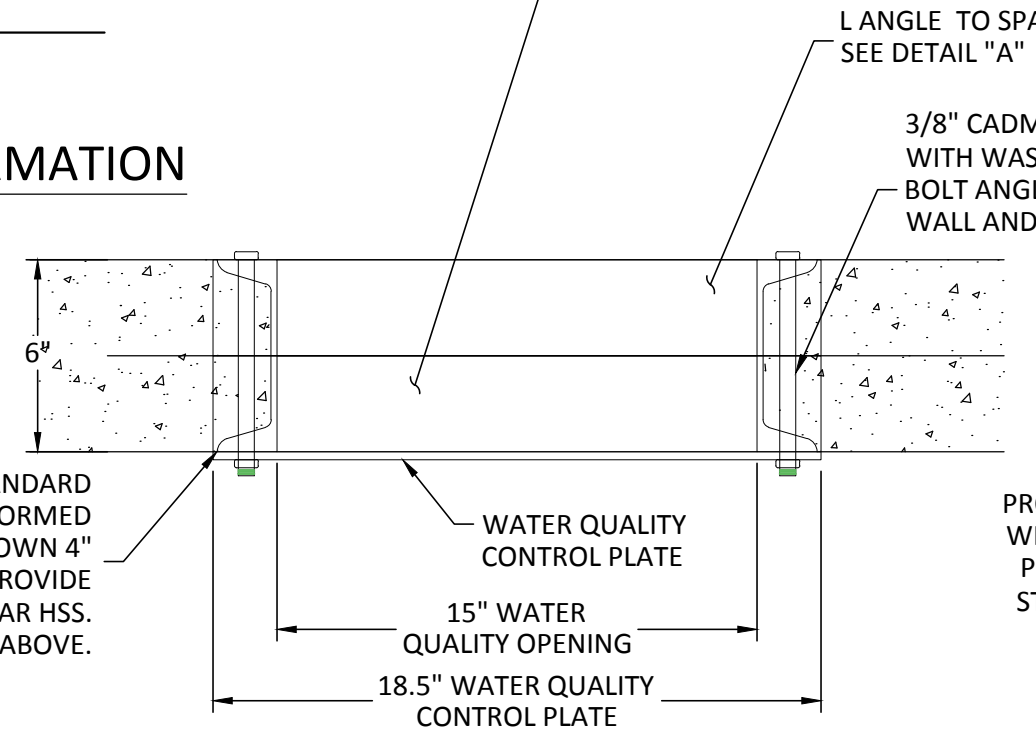
- NOTE: 1. ALL BEAMS, PLATES, CHANNELS AND GRATING SHALL BE HOT DIPPED GALVANIZED  
2. ALL BOLTS, NUTS, WASHERS & CONNECTION HARDWARE SHALL BE CADMIUM OR GALVANIZED

NOTE: THE BASE SLAB SHOULD BE EXTENDED 4 INCHES BEYOND EDGE OF STRUCTURE SHOULD CONTRACTOR ELECT TO POUR THE BASE ONLY. THIS WILL ALLOW ROOM TO PLACE SIDE WALL FORMS. PROVIDE BREAKOUT BARS FOR CONTINUOUS REINFORCEMENT.

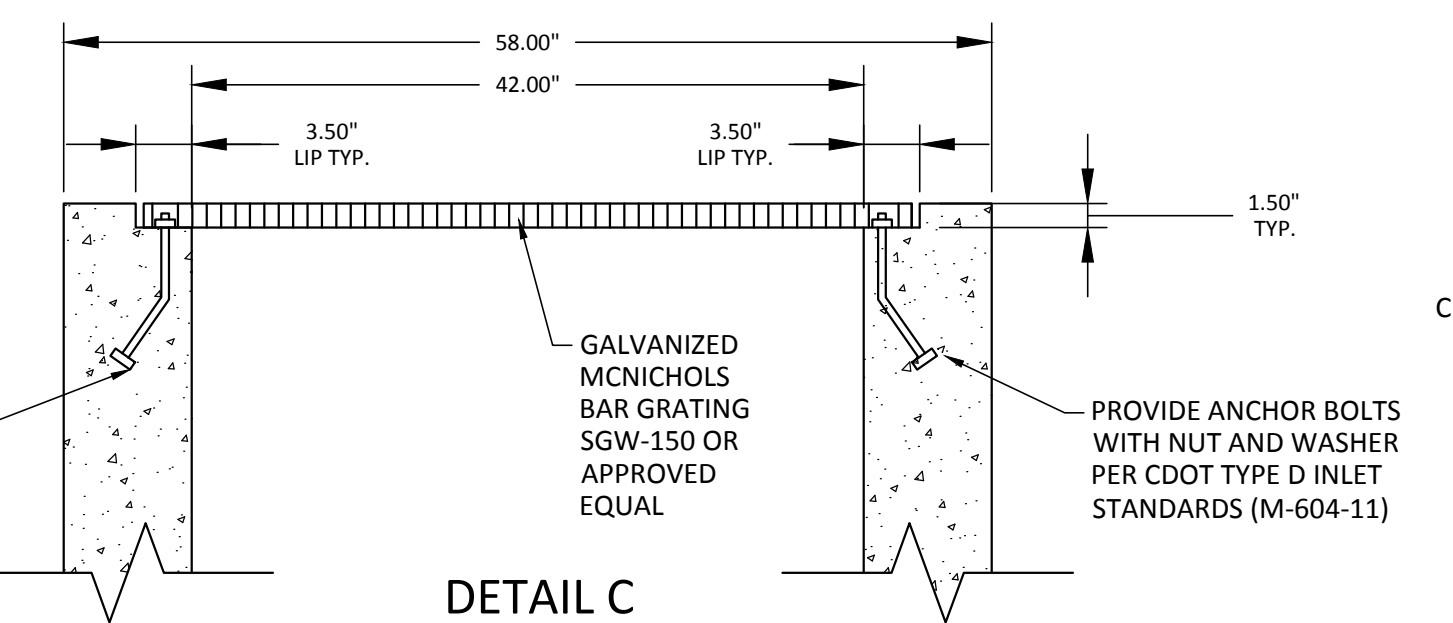


**DETAIL A  
INSTALLATION INFORMATION**  
N.T.S.

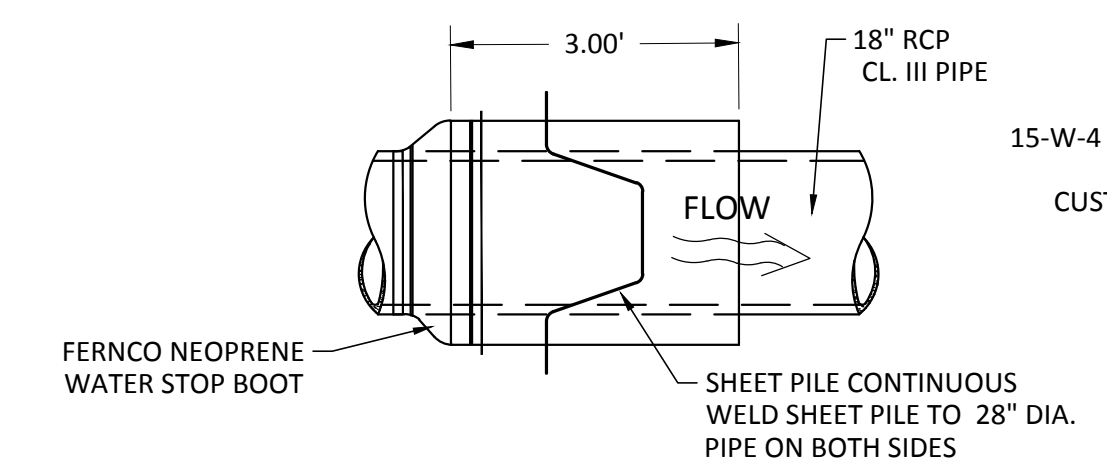
NOTE: C-CHANNEL AND TOP PLATE FRAME STRUCTURE SHALL BE SHOP FABRICATED AND HOT DIPPED GALVANIZED



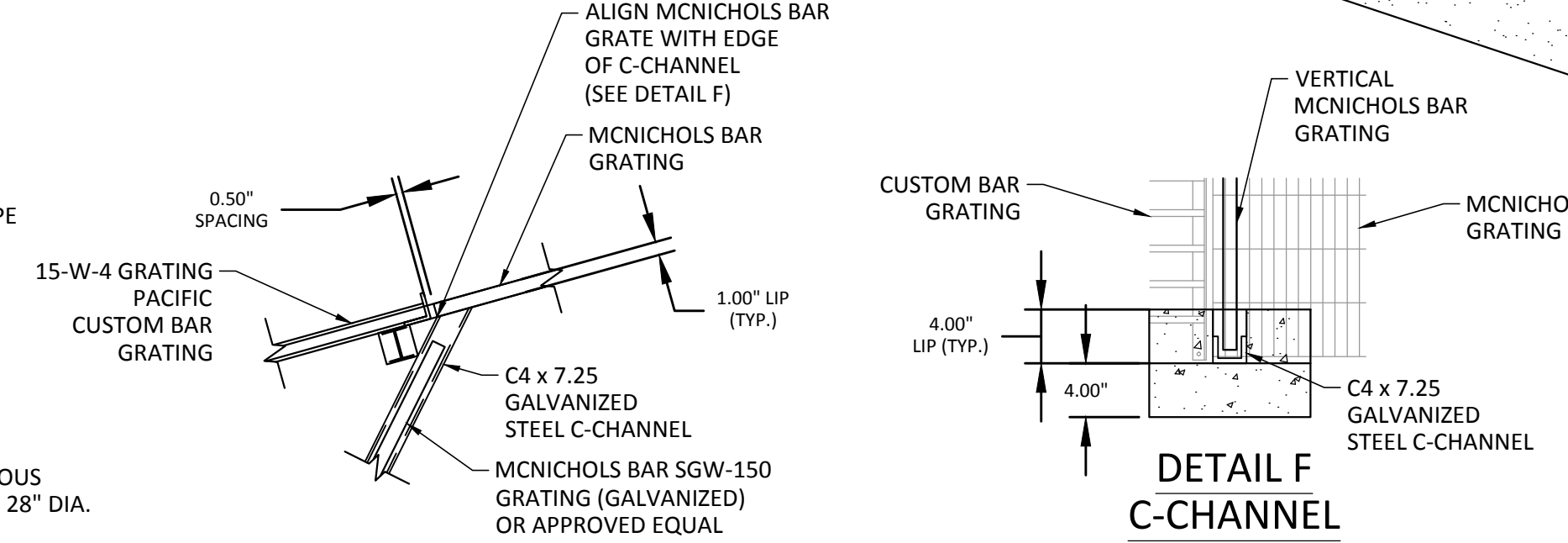
**DETAIL B  
OPENING DETAIL**  
N.T.S.



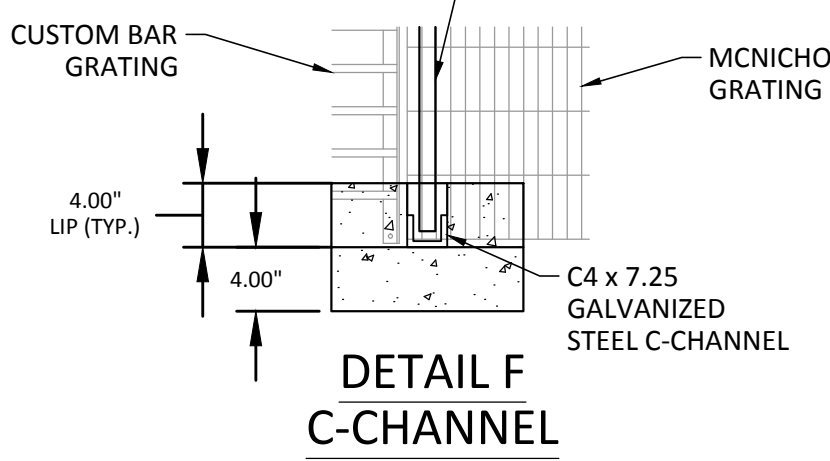
**DETAIL C  
GRATE SUPPORT**  
N.T.S.



**DETAIL D  
SHEET PILE PENETRATION  
DETAIL**  
1"=1-0"



**DETAIL E  
GRATE JUNCTION**  
N.T.S.



**DETAIL F  
C-CHANNEL**  
N.T.S.

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TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE



DATE	11/2015	1ST SUBMITTAL
REVISIONS		

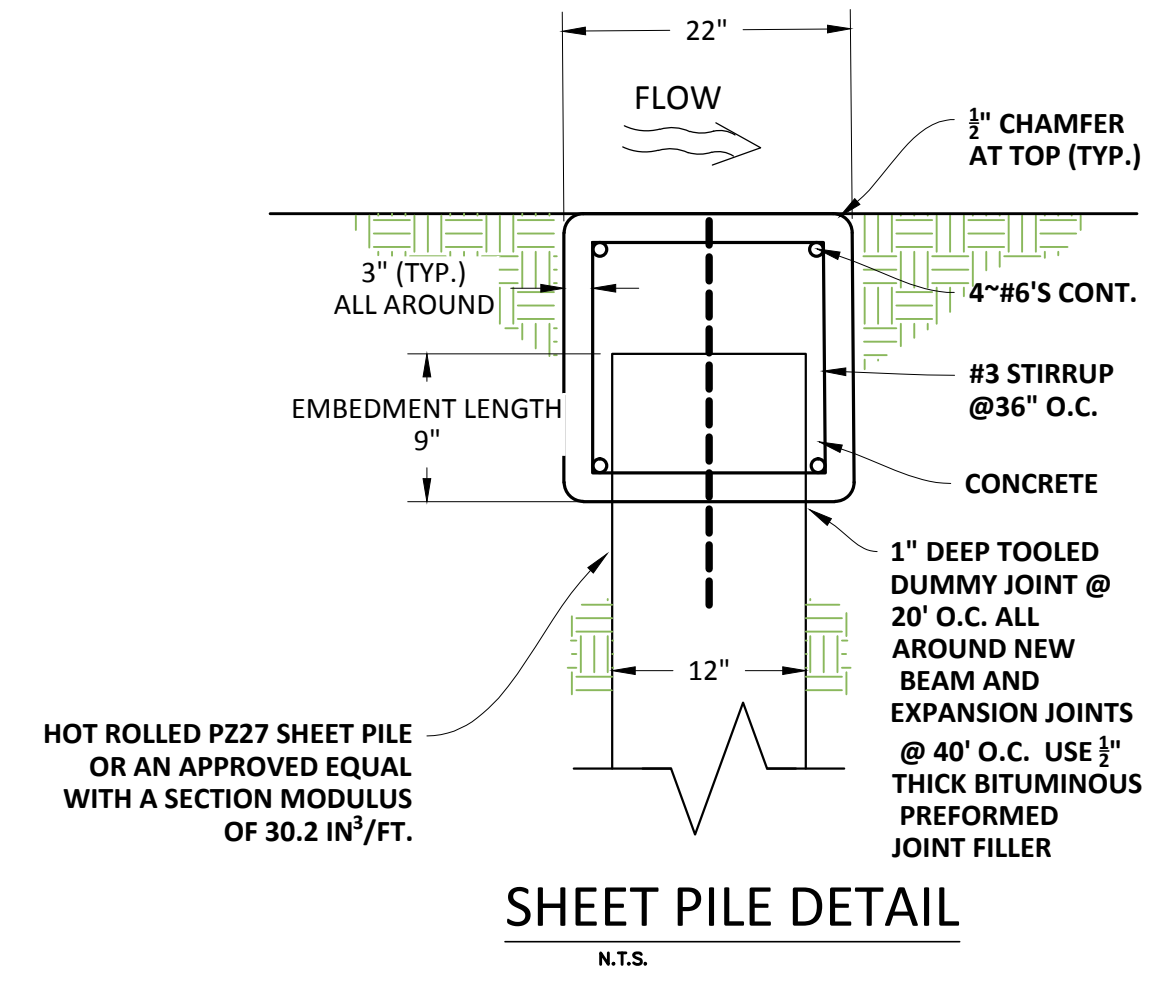
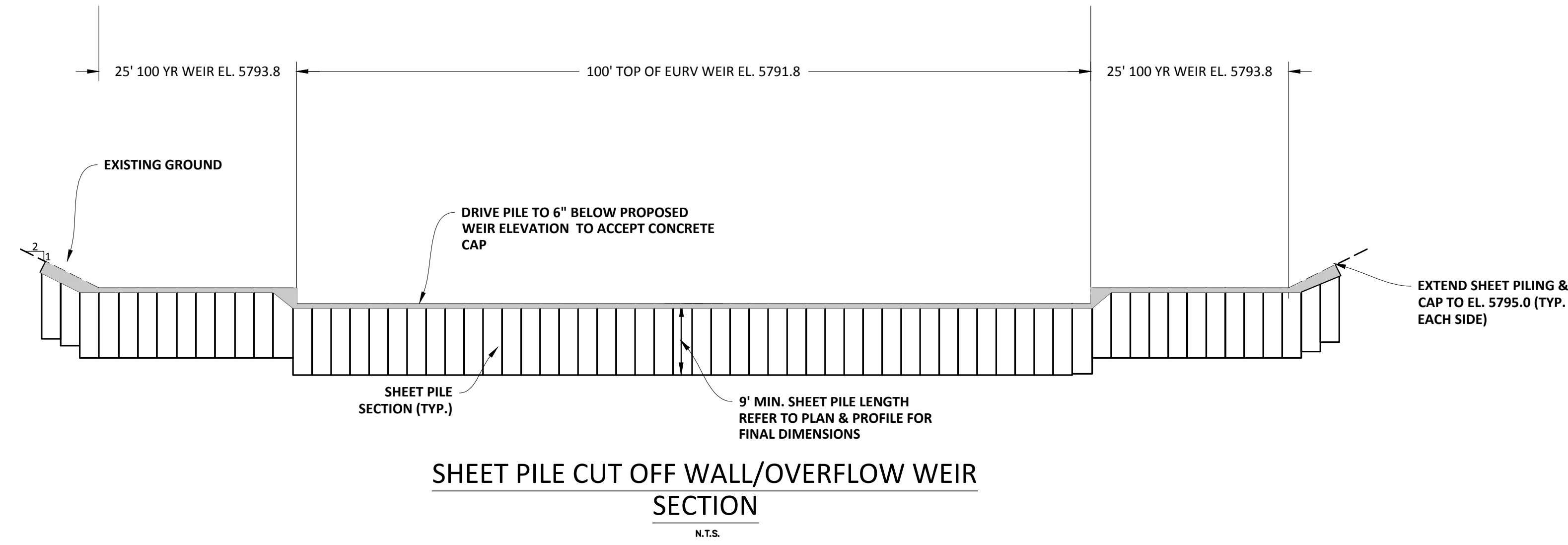
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**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY  
TOWN OF PARKER, COLORADO  
OUTLET STRUCTURE PLAN**

Project: 12/16/2015 9:25 AM, Dwg Name: P:\CLCPKC3\Compark3\Compark3\Drawings\Plan Set\Town\CLCPKC3\Drainage\Outlet Structure.dwg, Updated By: ahrucker

PENDING APPROVAL

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DATE	11/2015	1ST SUBMITTAL
REVISIONS		
EG		

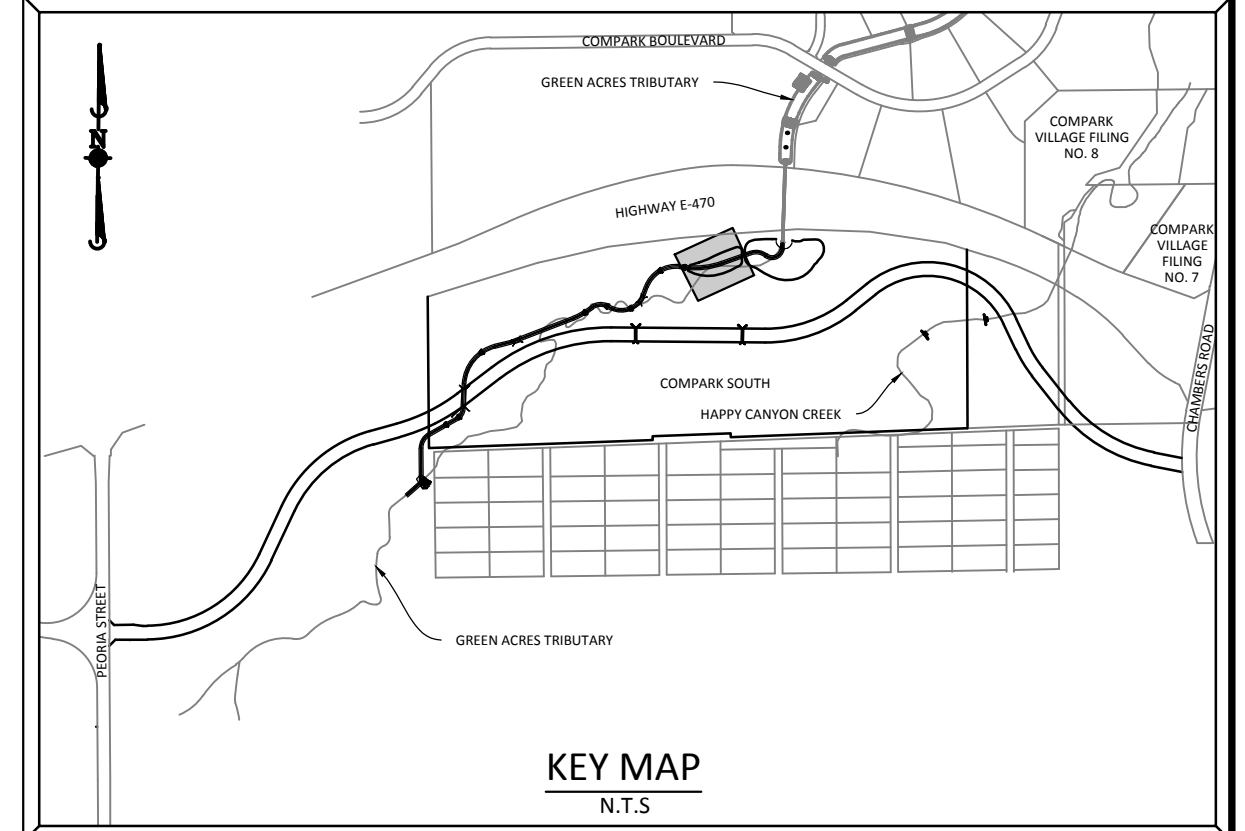
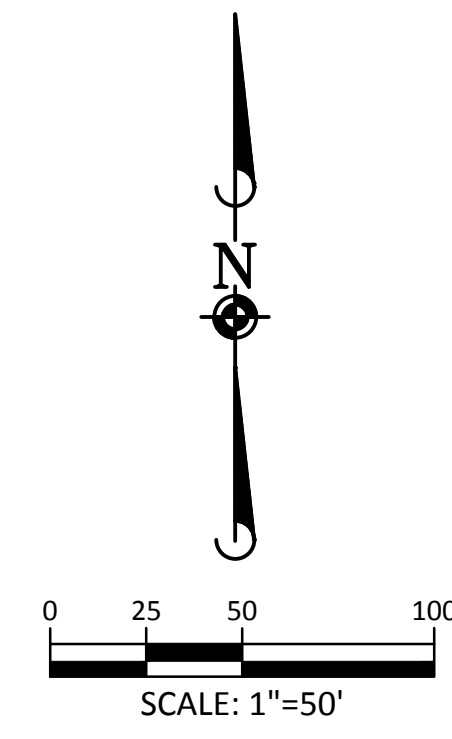
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**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**OUTLET STRUCTURE PLAN**

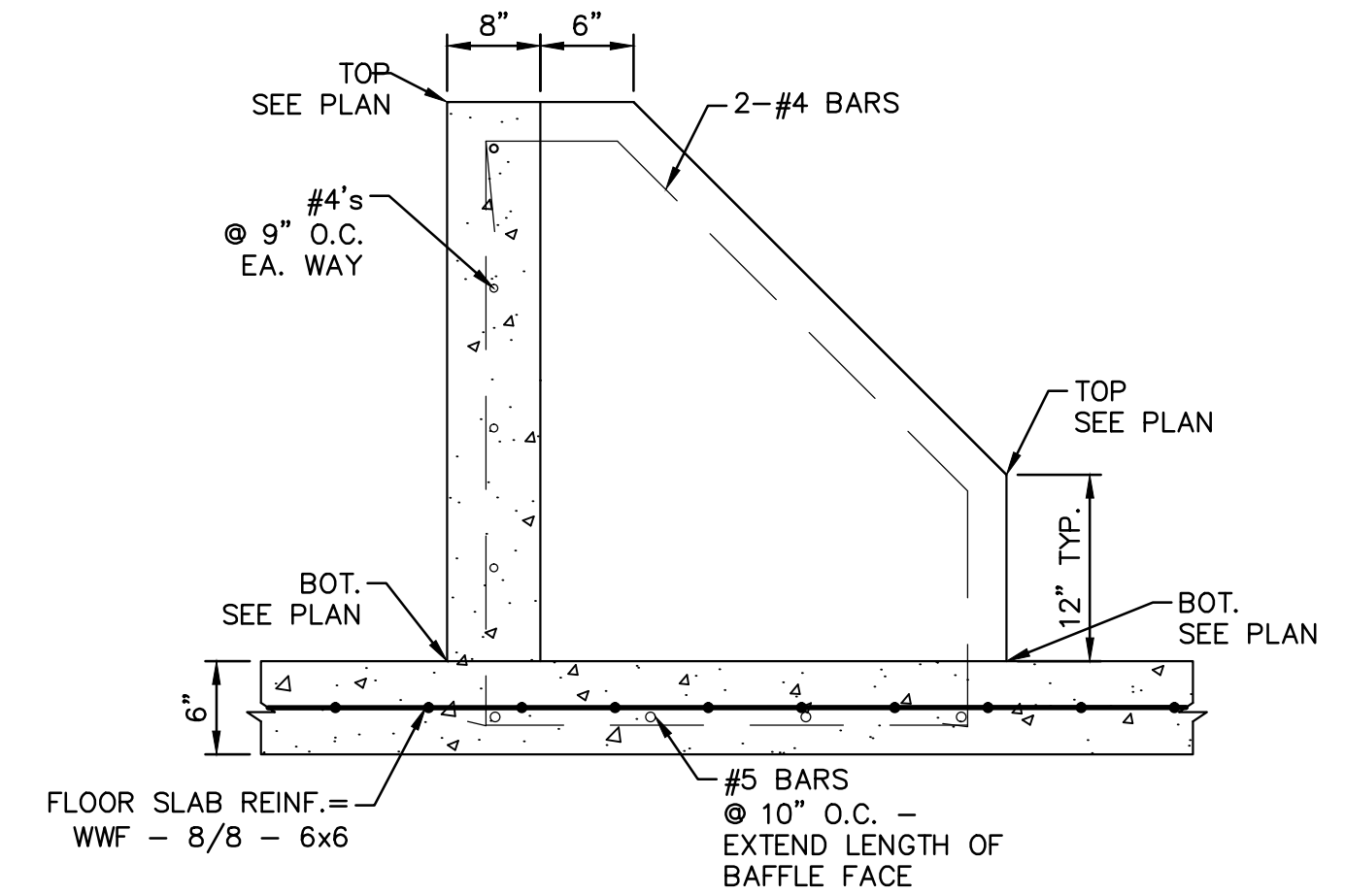
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PENDING APPROVAL

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**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 1.115010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET  
 SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF  
 THE CENTERLINE OF COMPAK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



**BAFFLE BLOCK REINFORCING  
 DETAIL**  
 1"=0.5'

**TOWN OF PARKER APPROVALS**

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 VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF  
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 PLAN(S), SPECIAL REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED AND ON FILE WITH  
 THE TOWN OF PARKER.

TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE



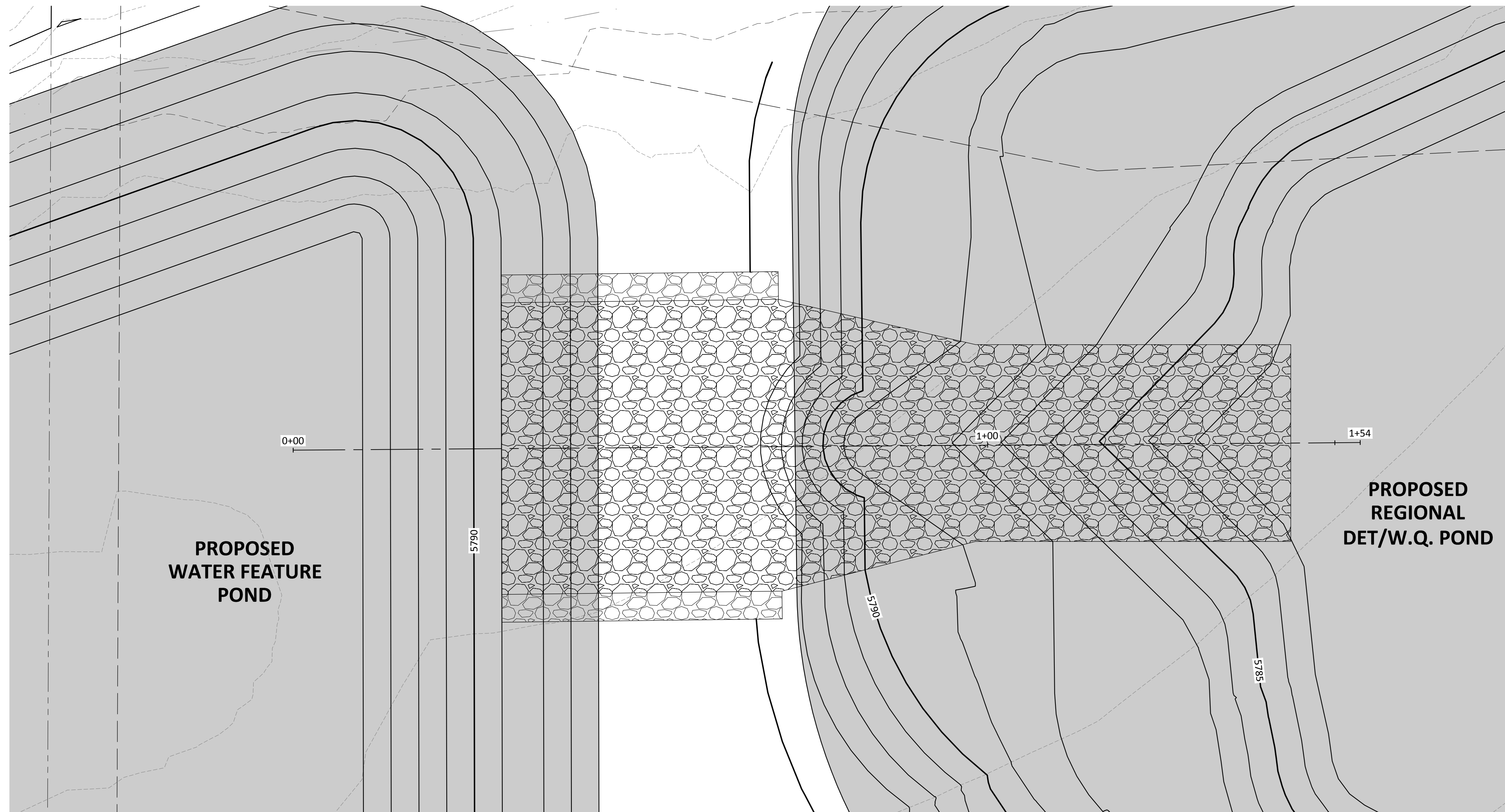
DATE	11/2015	1ST SUBMITTAL	EG
REVISIONS			
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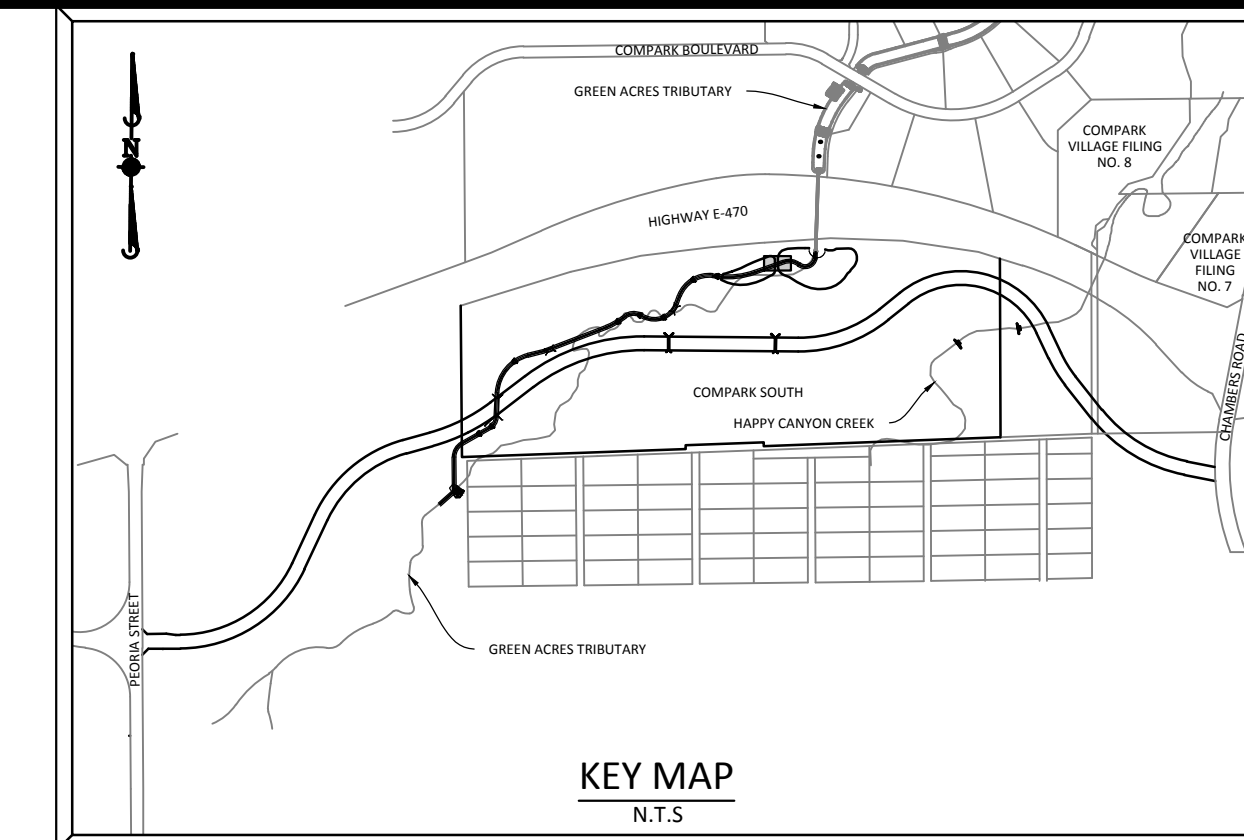
**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**POND FORBAY STRUCTURE**

PROJ. MGR.: **RLB**  
 PROJ. ASSOC.: **ASD**  
 DRAWN BY: **ETG**  
 DATE: **11/2015**  
**SHEET**  
**17 OF 31**  
**CLCPKC3**

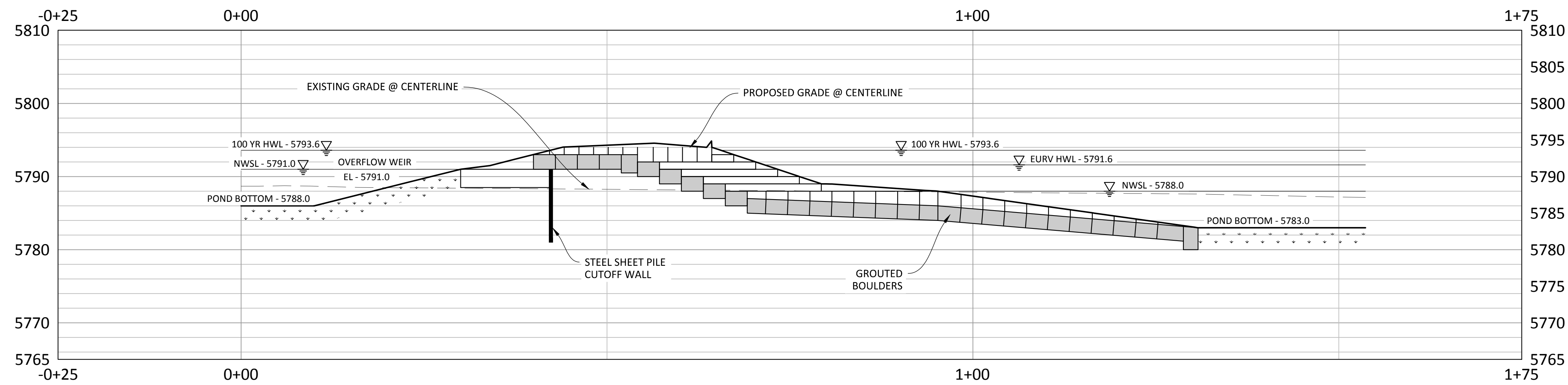
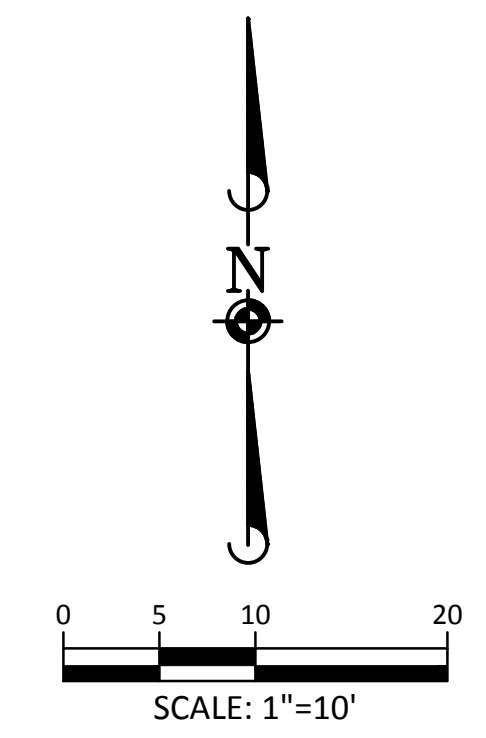
PENDING APPROVAL



PLAN: GROUTED BOULDER DROP STRUCTURE



**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 1.115010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



PROFILE: GROUTED BOULDER DROP STRUCTURE

**TOWN OF PARKER APPROVALS**

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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE



DATE	11/2015	1ST SUBMITTAL	EG
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COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY  
 TOWN OF PARKER, COLORADO  
 INTER-POND DROP STRUCTURE

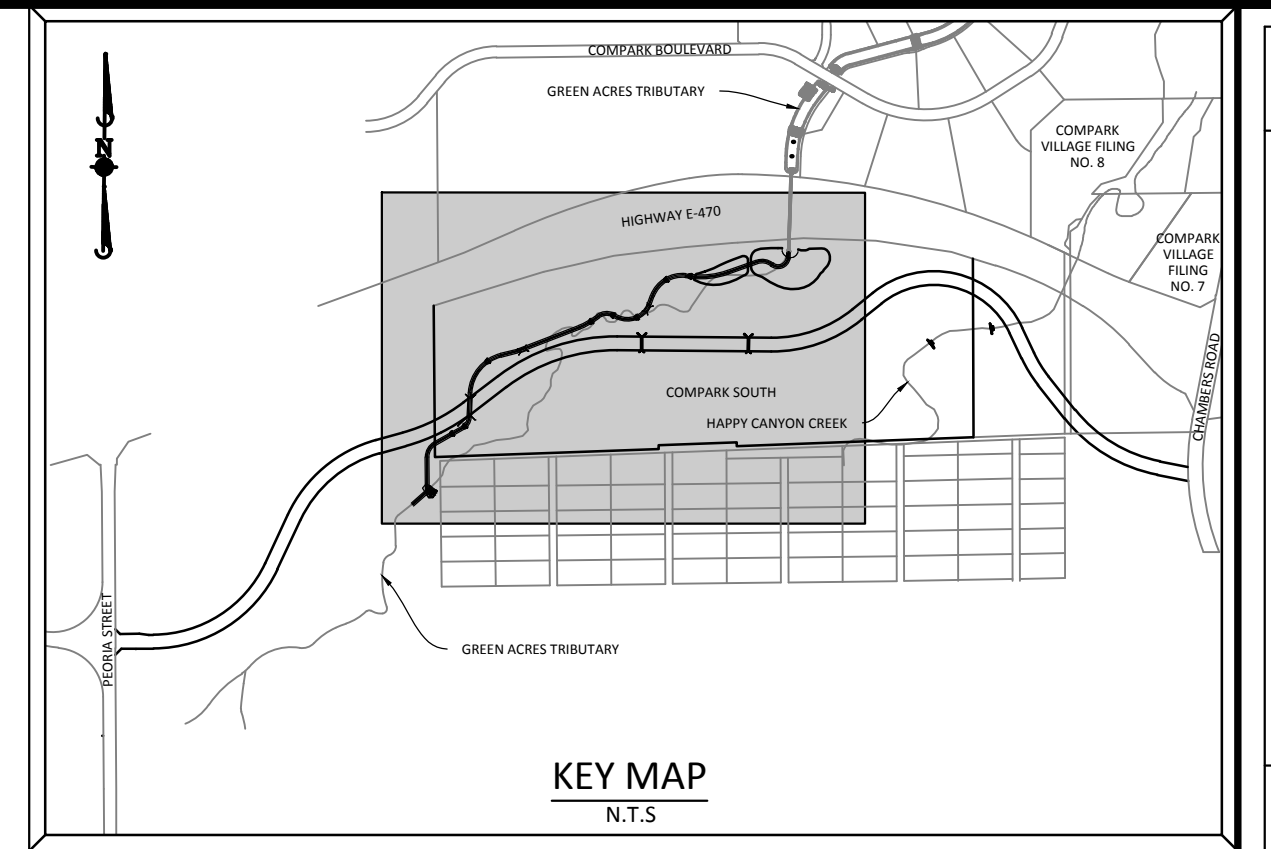
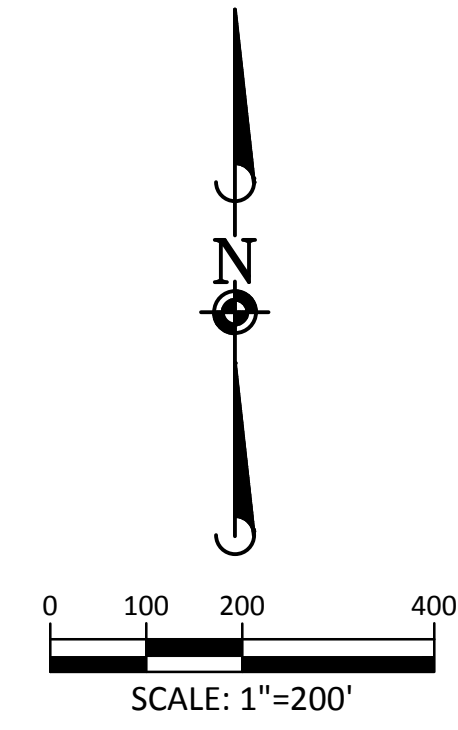
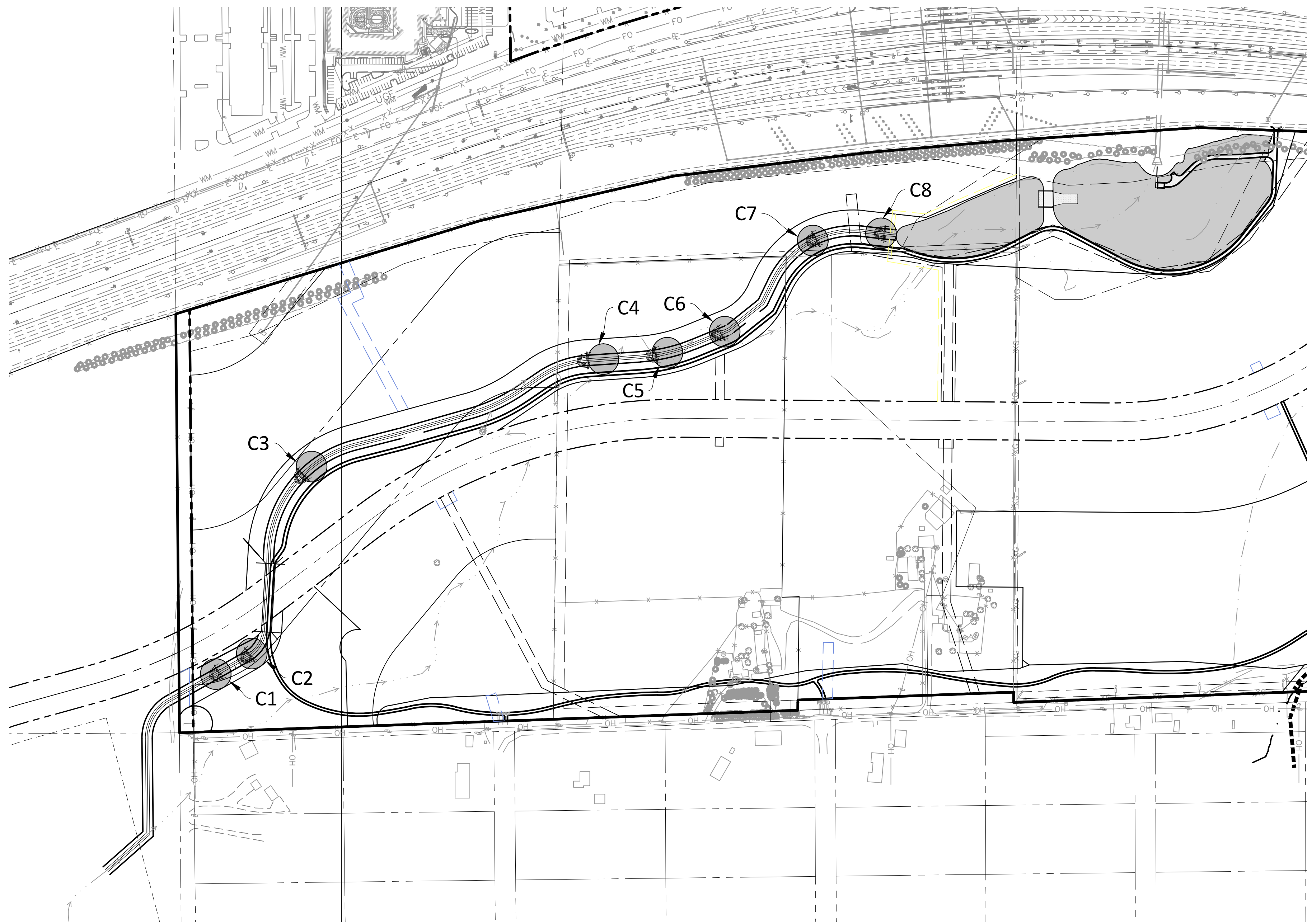
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PROJ. ASSOC.: ASD
DRAWN BY: ETG
DATE: 11/2015
SHEET
<b>18 OF 31</b>
CLCPKC3

PENDING APPROVAL

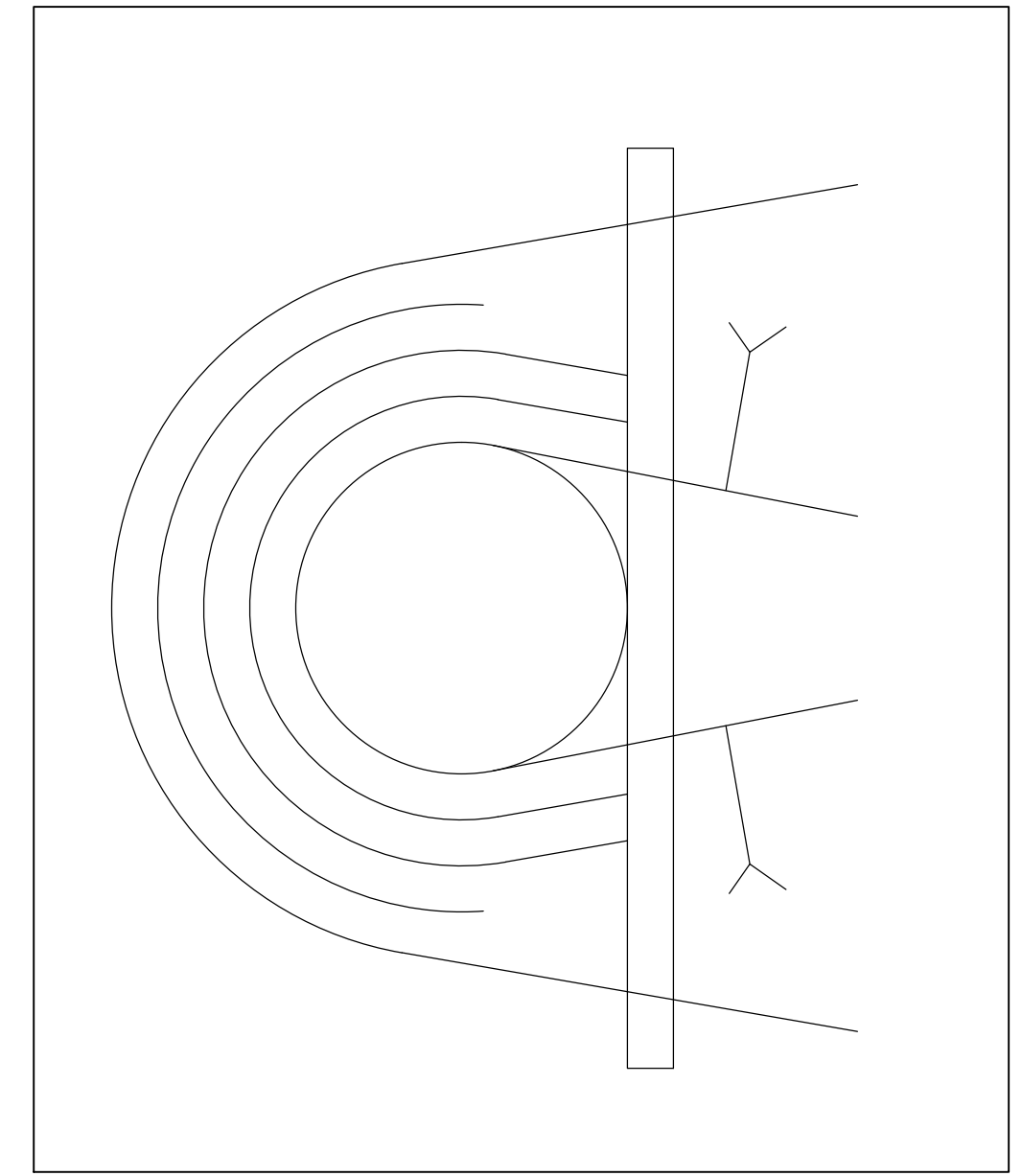
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Plotted: 12/16/2015 9:38 AM, Day Name: P:\Projects\3\CompSouth\GreenAcres\Trib\Drawings\Plan\Sub\Town\CLCPKC3\Drainage\Drop Structure\Plan.dwg, Updated By: dclatz



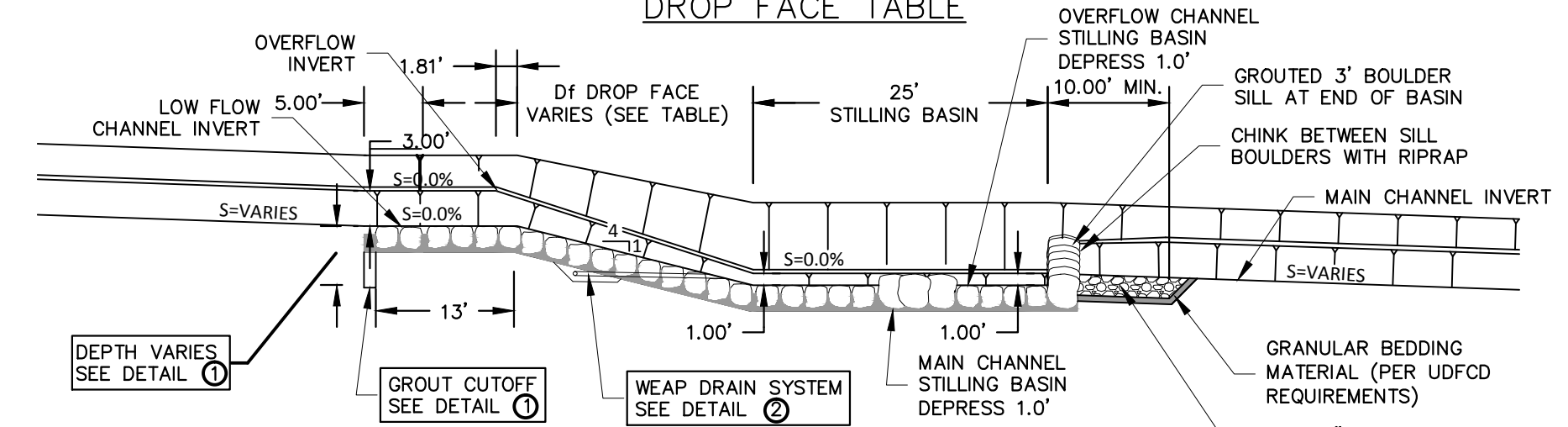
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 SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF  
 THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



**DROP STRUCTURE POINT DETAIL**  
 (REFER TO POINT TABLES FOR ELEVATIONS)

STA	Df
42+03.56	23.90'
48+53.24	19.36'

**DROP FACE TABLE**



**DROP STRUCTURE PROFILE**  
 N.T.S.

**TOWN OF PARKER APPROVALS**

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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE

DATE	REVISIONS	EG

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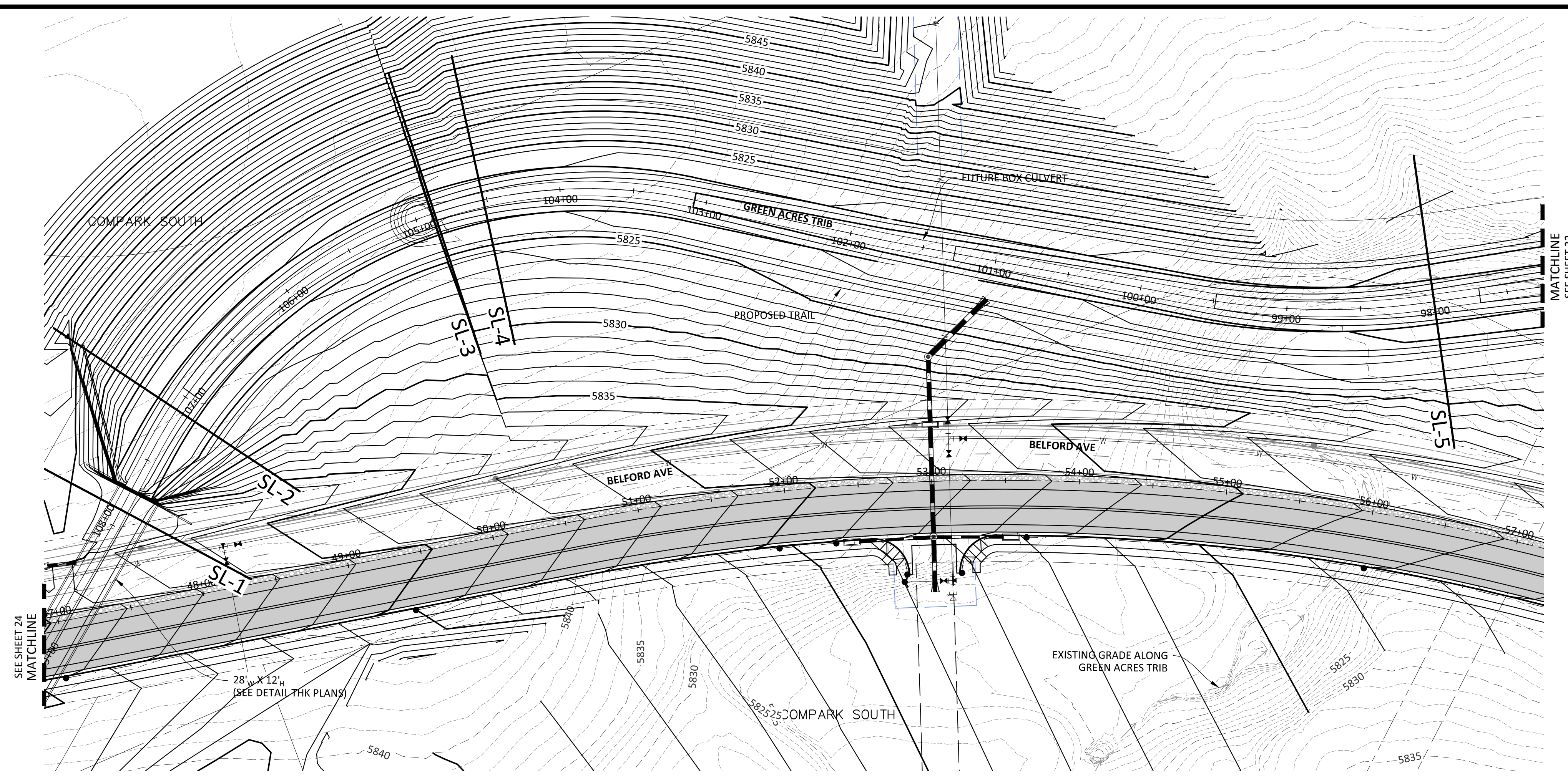
**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**DROP STRUCTURE DETAIL PLAN**

PROJ. MGR.: RLB
PROJ. ASSOC.: ASD
DRAWN BY: ETG
DATE: 11/2015
<b>SHEET</b>
<b>20 OF 31</b>
CLCPKC3

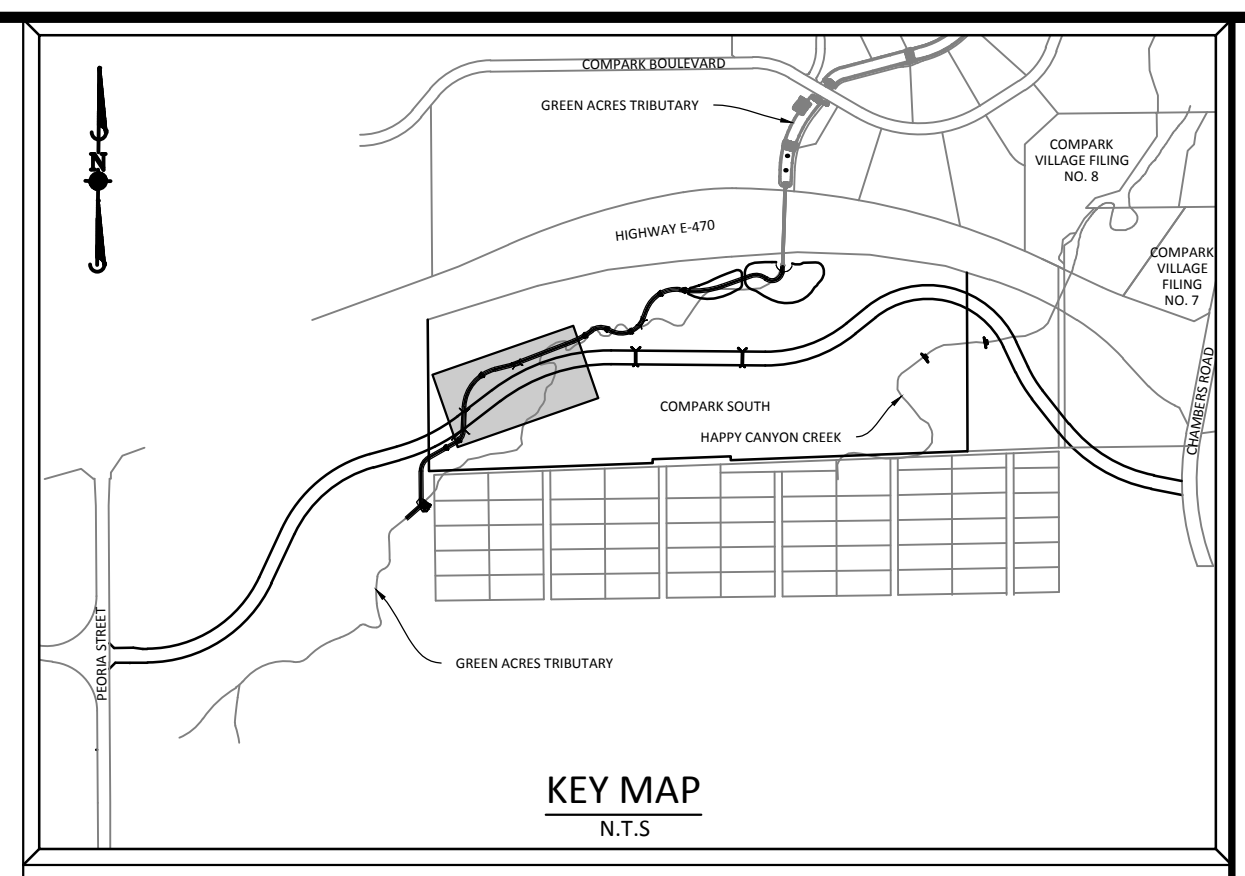
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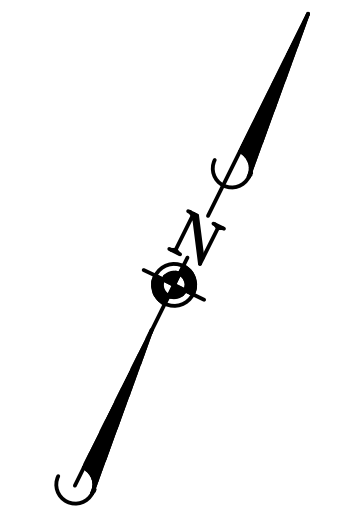




PLAN: DRAINAGE CHANNEL



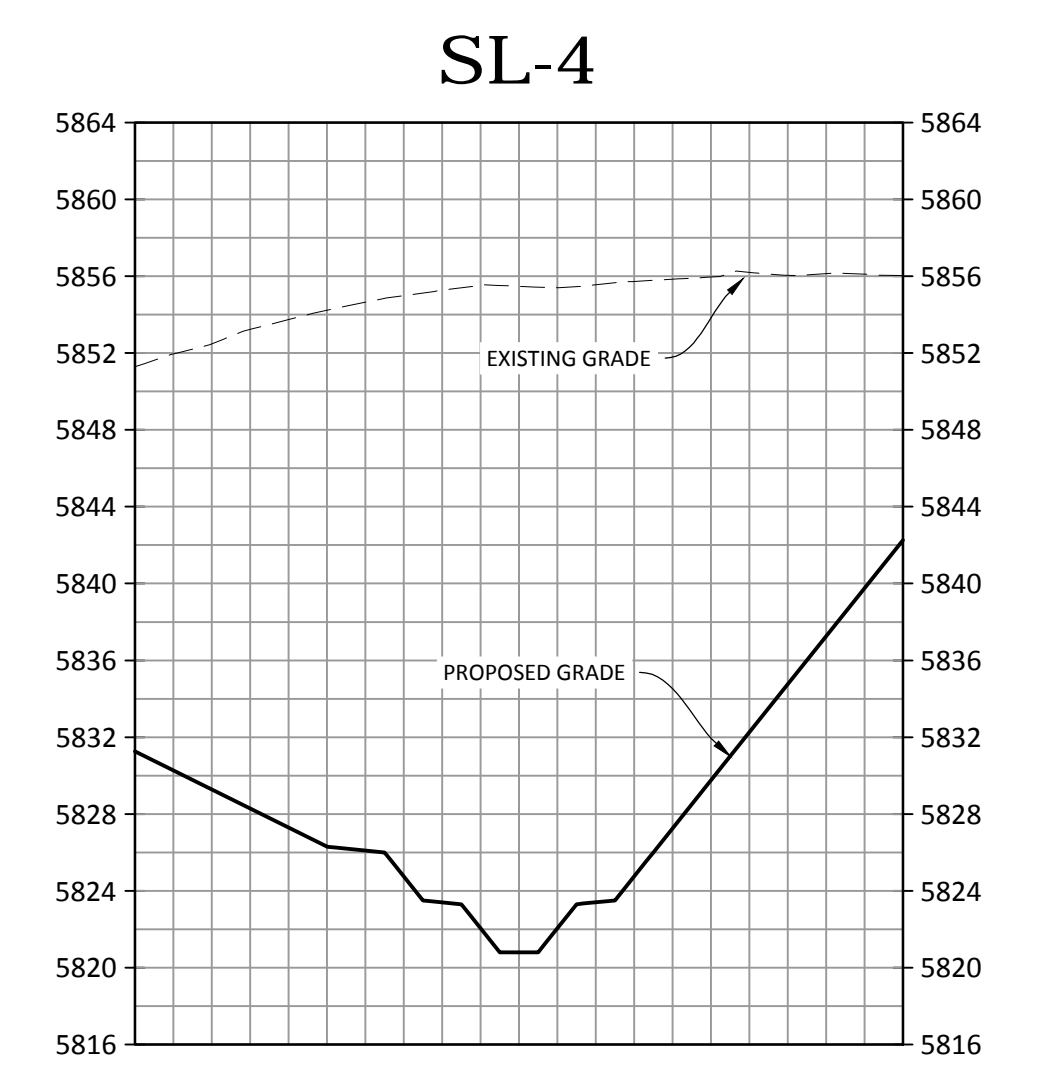
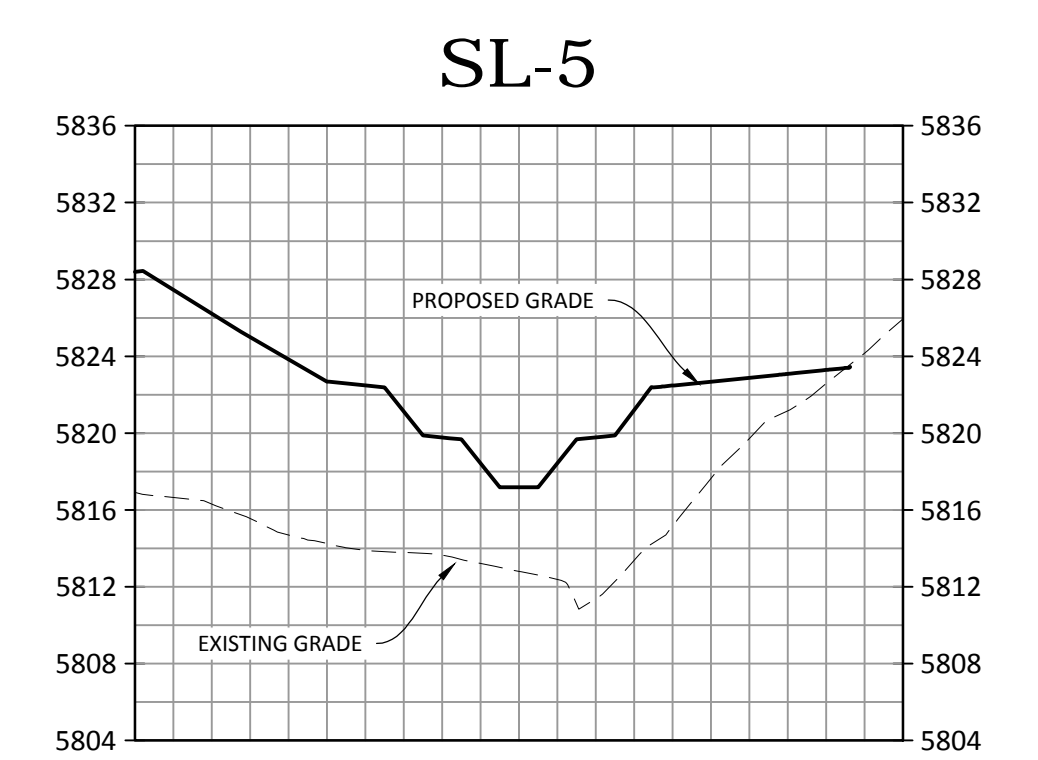
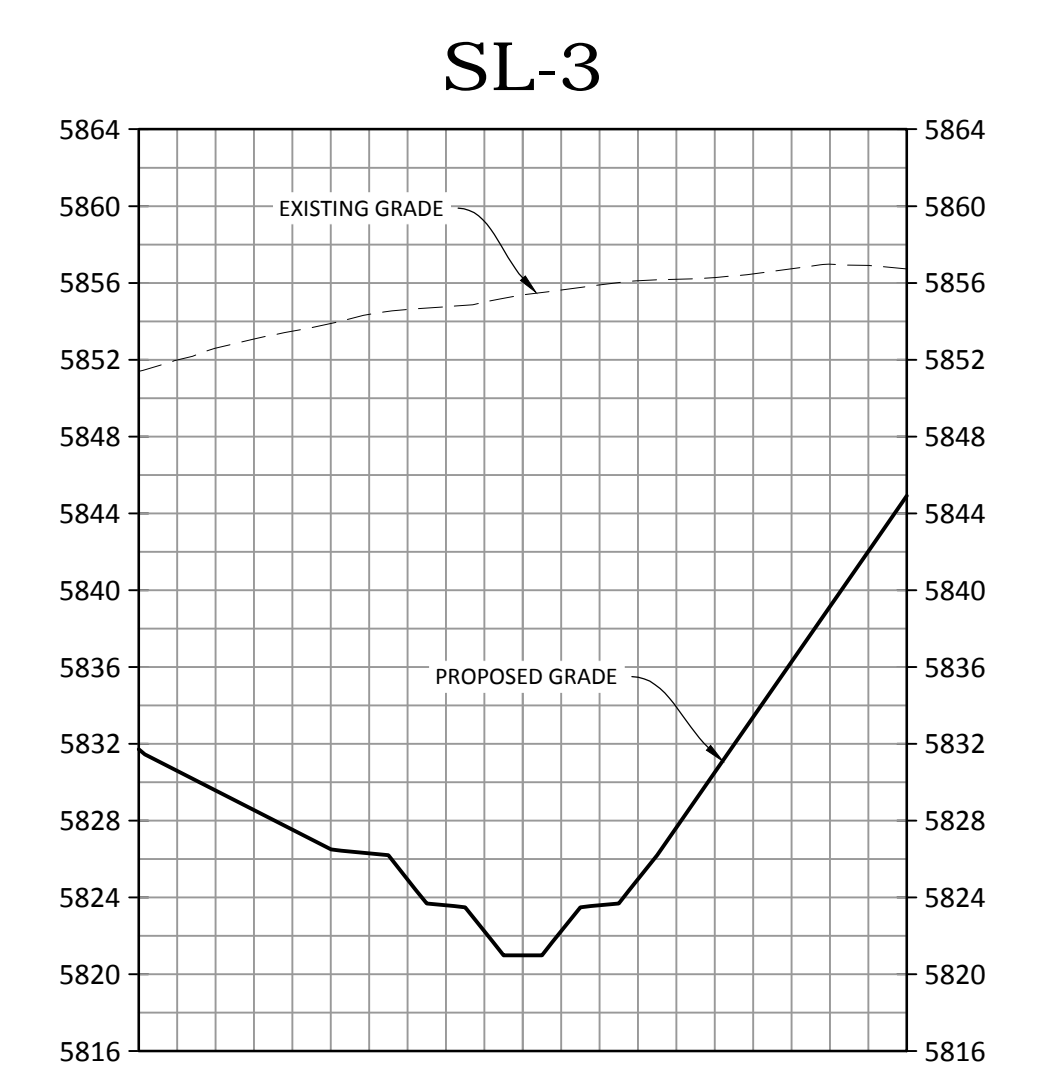
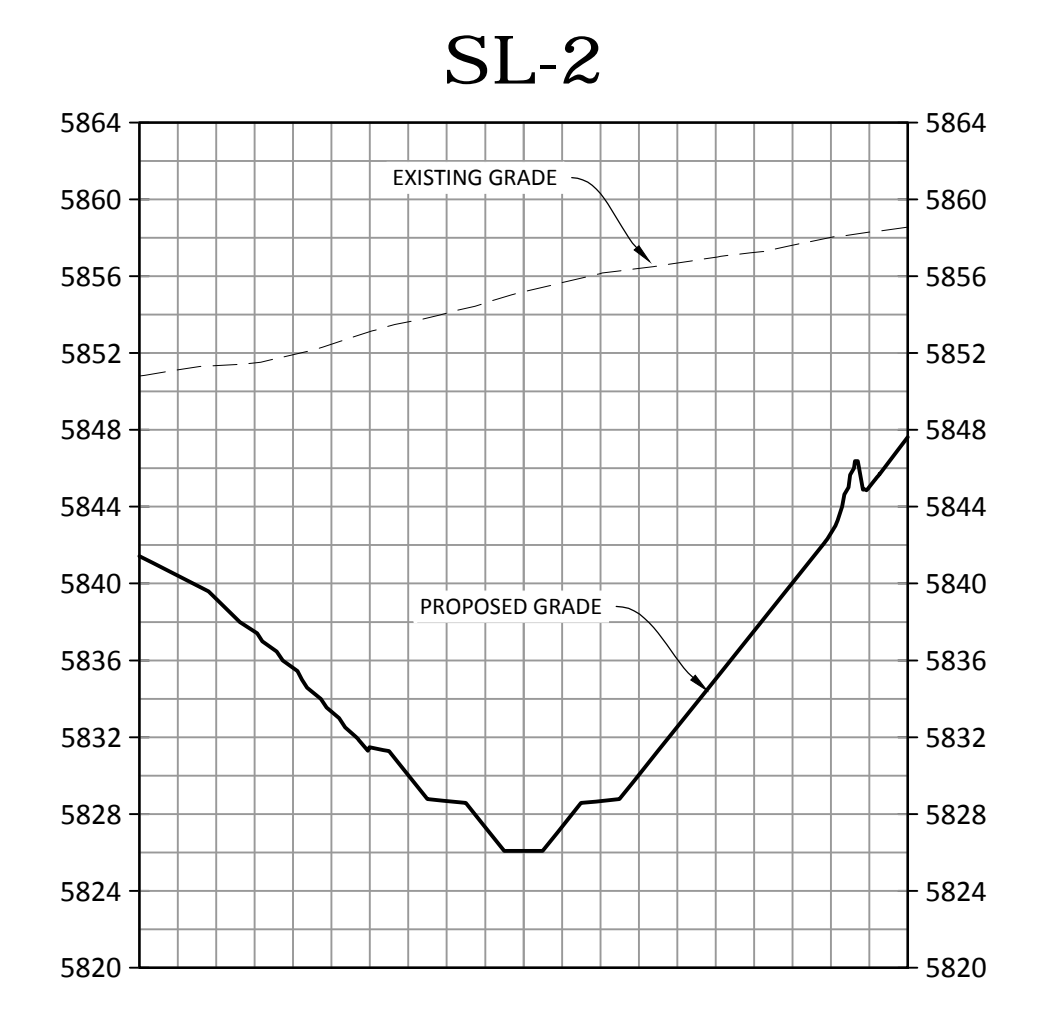
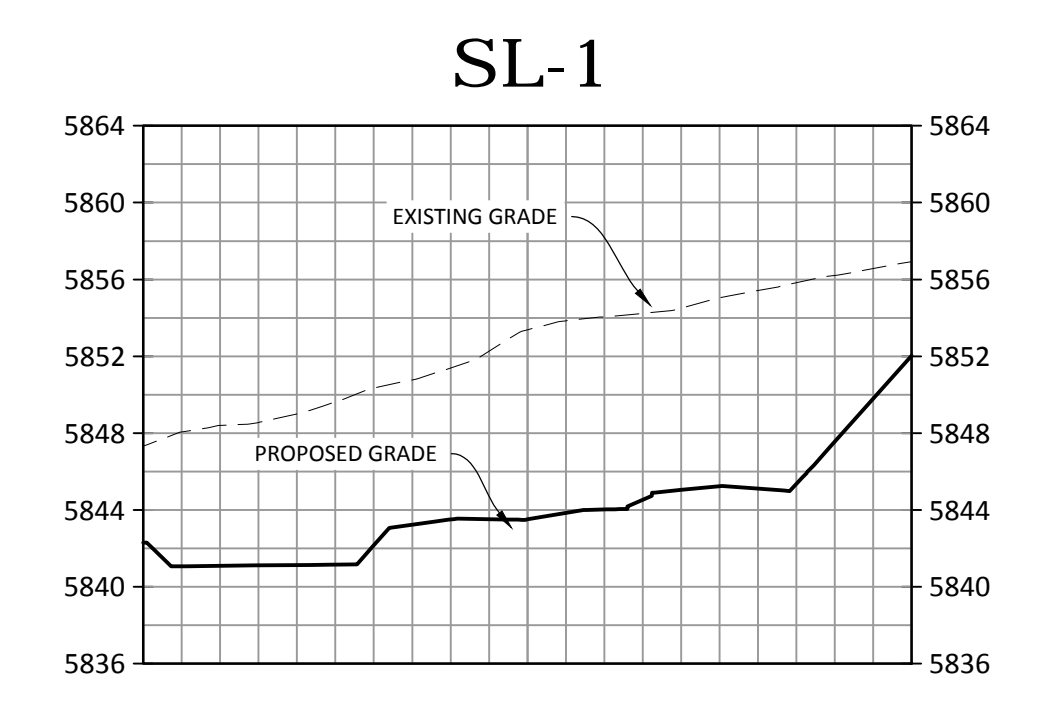
**SOURCE BENCHMARKS:**  
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0 25 50 100  
 SCALE: 1"=50'  
 VERTICAL SCALE: 1"=5'



Know what's below.  
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CROSS SECTIONS: DRAINAGE CHANNEL

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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE

DATE	REVISIONS	DRAWN BY	EG

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COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY  
 TOWN OF PARKER, COLORADO  
 CHANNEL CROSS SECTIONS

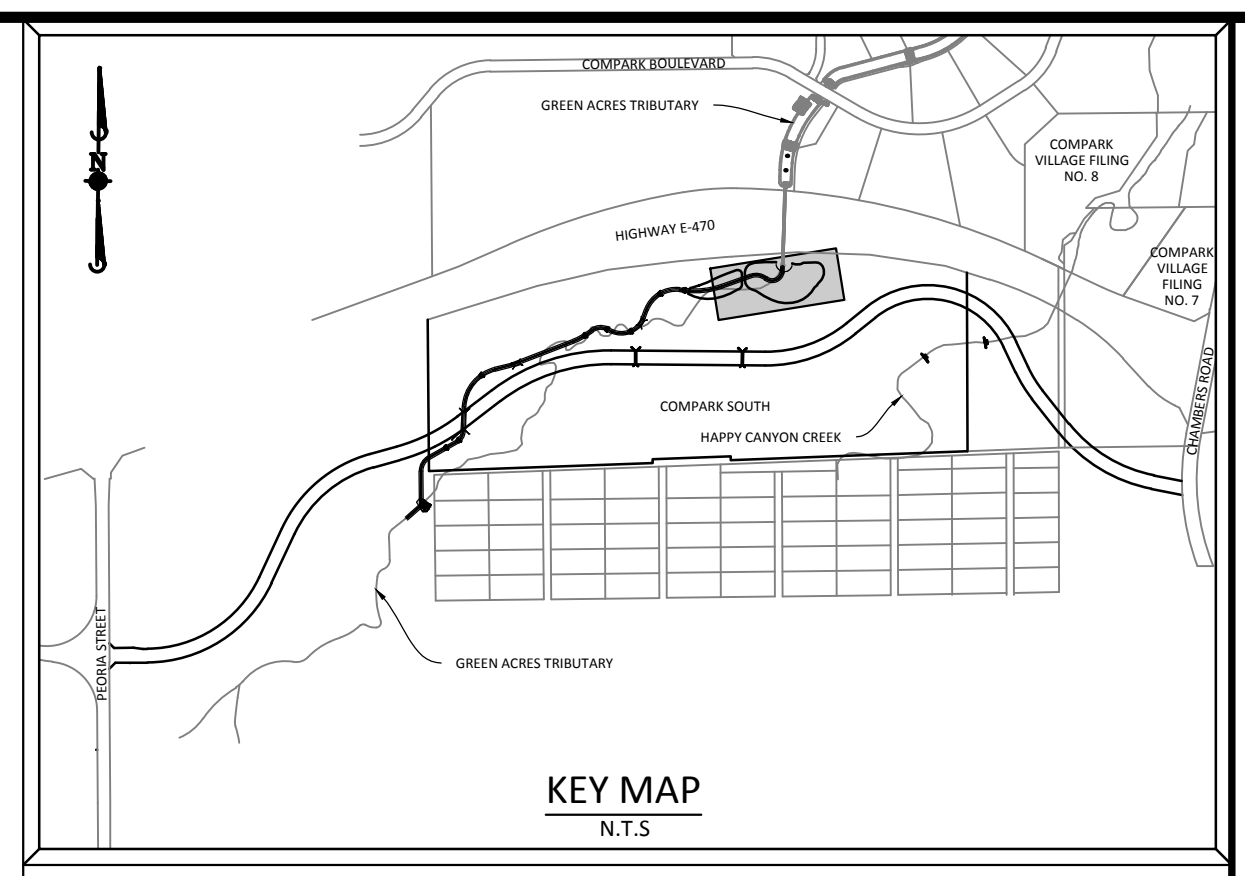
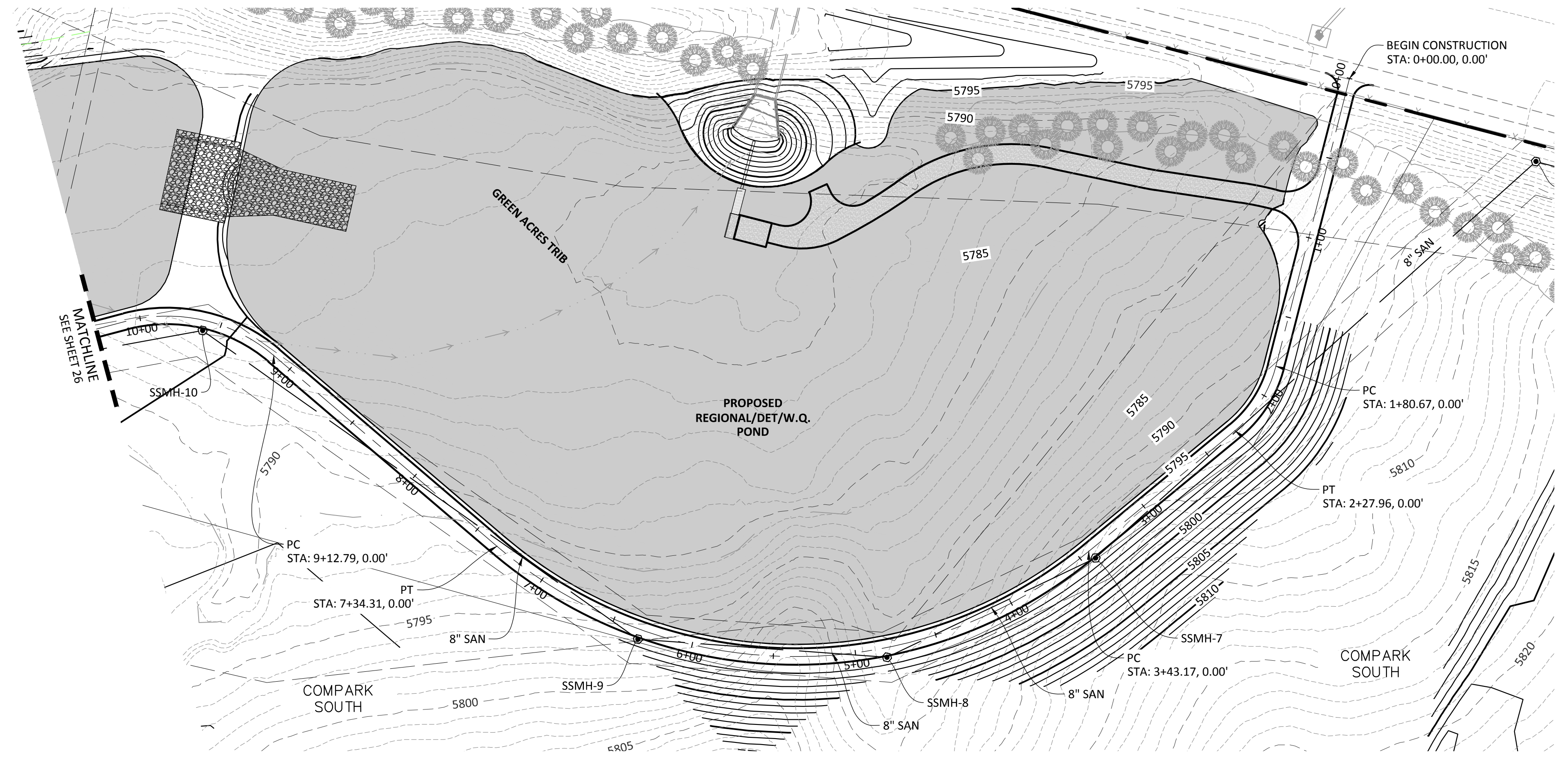
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PROJ. ASSOC.: ASD
DRAWN BY: ETG
DATE: 11/2015
SHEET
<b>23 OF 31</b>
CLCPKC3

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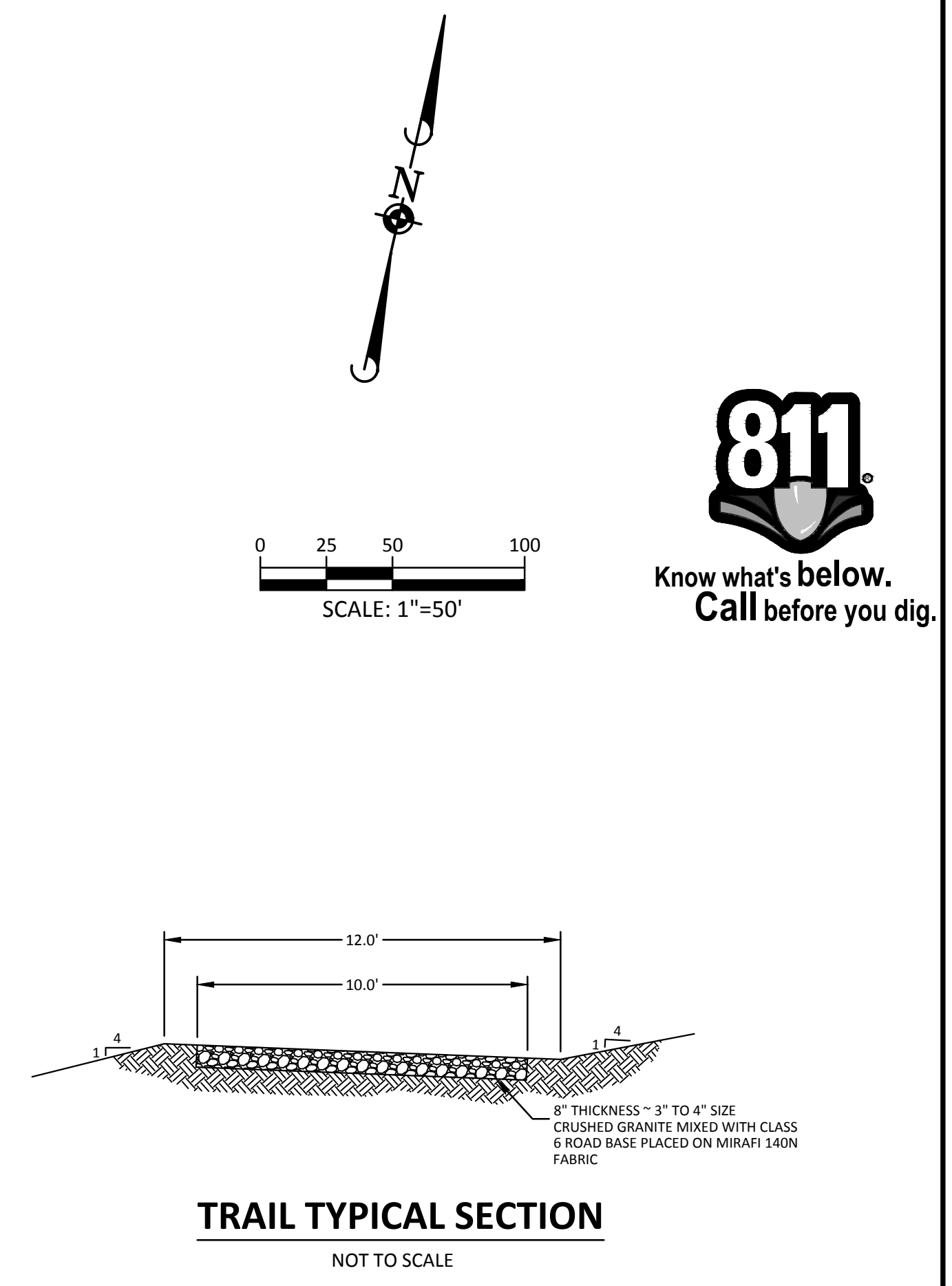
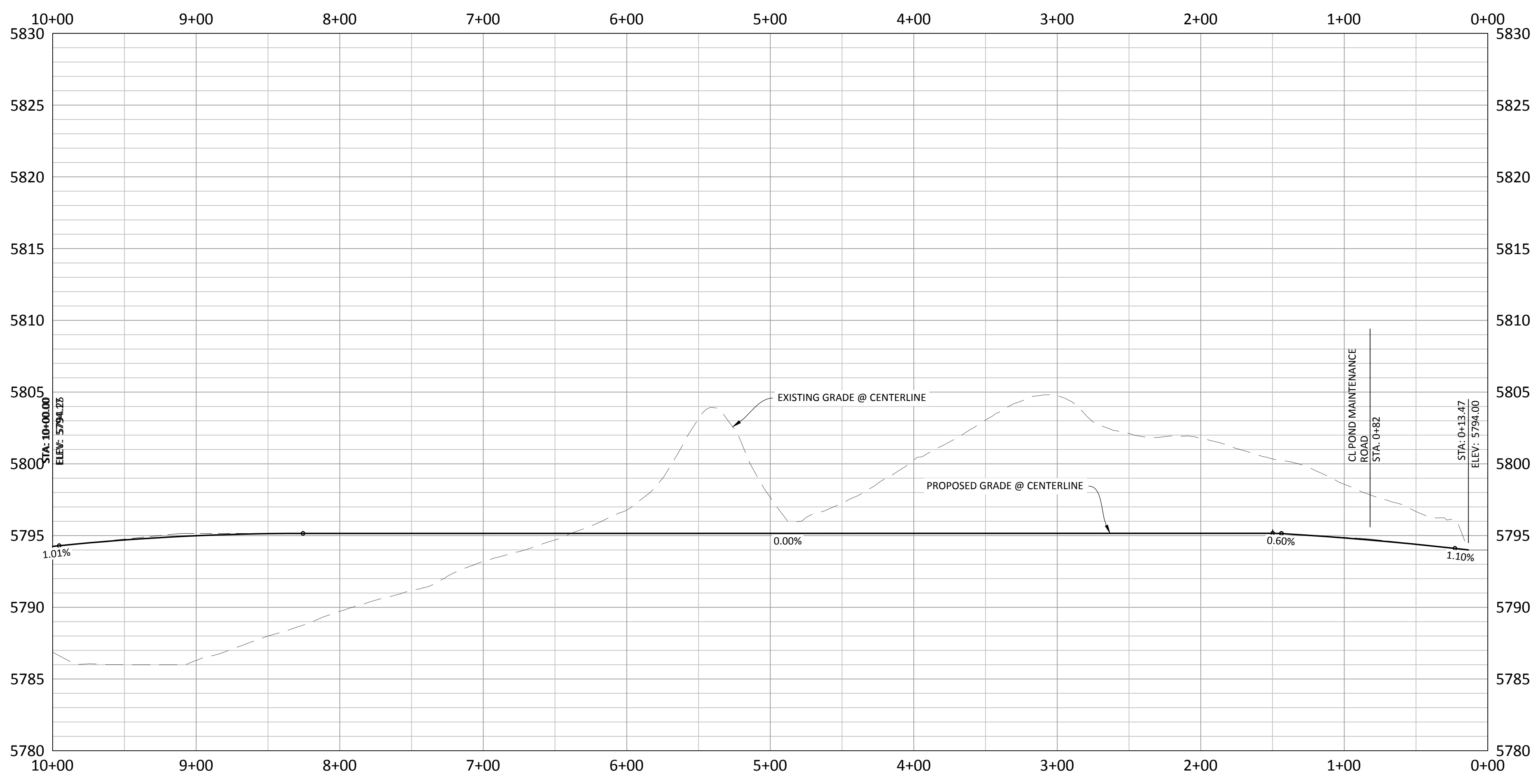
PENDING APPROVAL





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REVISIONS	
NO.	DESCRIPTION
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TOWN OF PARKER, PUBLIC WORKS DIRECTOR	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-STORMWATER	DATE
TOWN OF PARKER, PUBLIC WORKS MANAGER-TRANSPORTATION	DATE

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**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**  
**TOWN OF PARKER, COLORADO**  
**TRAIL PLAN & PROFILE**

PROJ. MGR.: RLB  
 PROJ. ASSOC.: ASD  
 DRAWN BY: ETG  
 DATE: 11/2015

SHEET  
**25 OF 31**  
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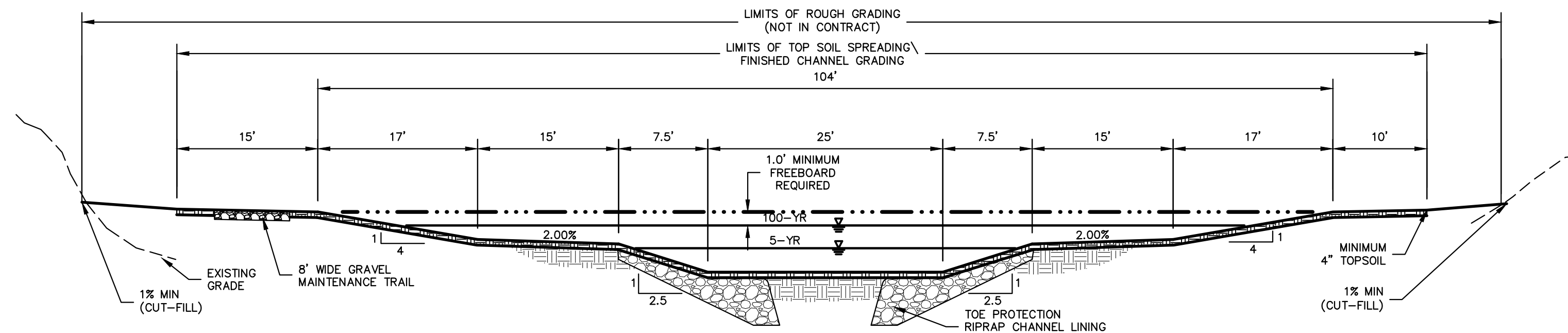
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**NOTE:**  
 BEGIN CHANNEL CONSTRUCTION AT STA: 24+51.26. TRANSITION FROM NATURAL CHANNEL SECTION (STA: 24+51.26) TO TYPICAL CHANNEL SECTION (STA: 26+50.00).

TYPICAL CHANNEL SECTION—LOOKING UPSTREAM GREEN ACRES TRIBUTARY

**MATERIAL SPECIFICATIONS**

1. ALL GROUT WILL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH EQUAL TO 3000 PSI.
2. ONE CUBIC YARD OF GROUT SHALL HAVE A MINIMUM OF SIX (6) SACKS OF CEMENTITIOUS MATERIAL.
3. TYPE II CEMENT SHALL BE USED. A MAXIMUM OF 25% FLY ASH MAY BE SUBSTITUTED FOR THE CEMENTITIOUS MATERIAL.
4. THE AGGREGATE SHALL BE COMPRISED OF 70% NATURAL SAND (FINES) AND 30% 3/8" - INCH ROCK (COARSE).
5. THE SLUMP SHALL BE 5-INCHES TO 7-INCHES.
6. AIR ENTRAINMENT SHALL BE 7 1/2 PERCENT ± 1 1/2 PERCENT.
7. TO CONTROL SHRINKAGE AND CRACKING, 1.5 POUNDS OF FIBER MESH, OR EQUIVALENT, SHALL BE USED PER CUBIC YARD OF GROUT.

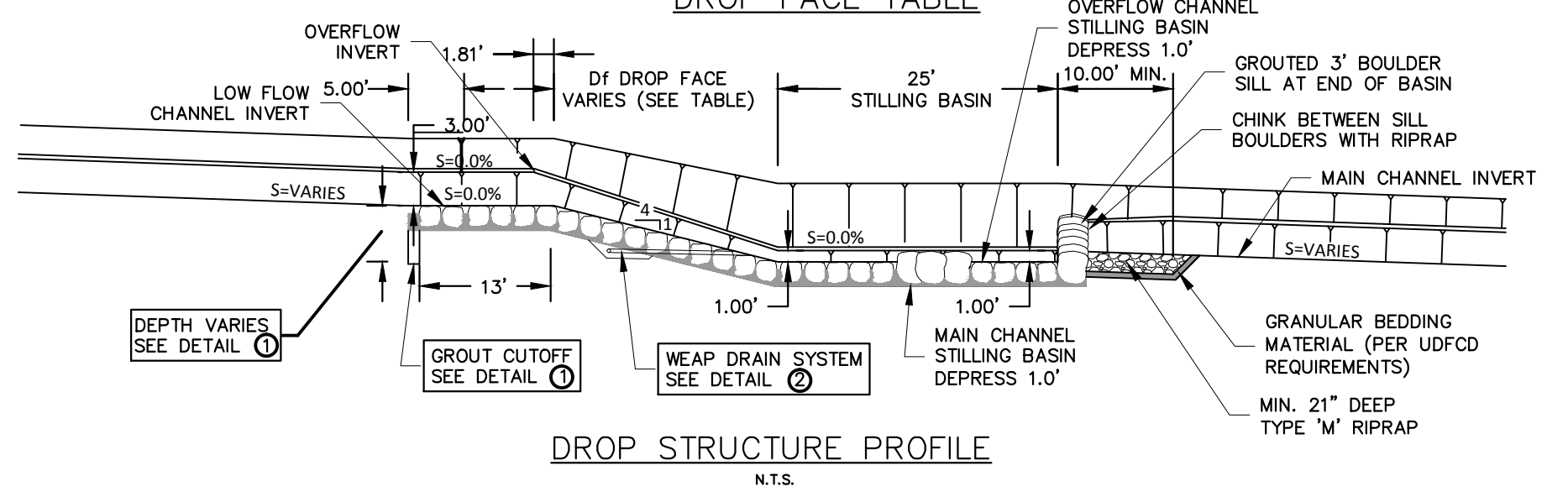
**GROUT & BOULDER NOTES**

**PLACEMENT SPECIFICATIONS**

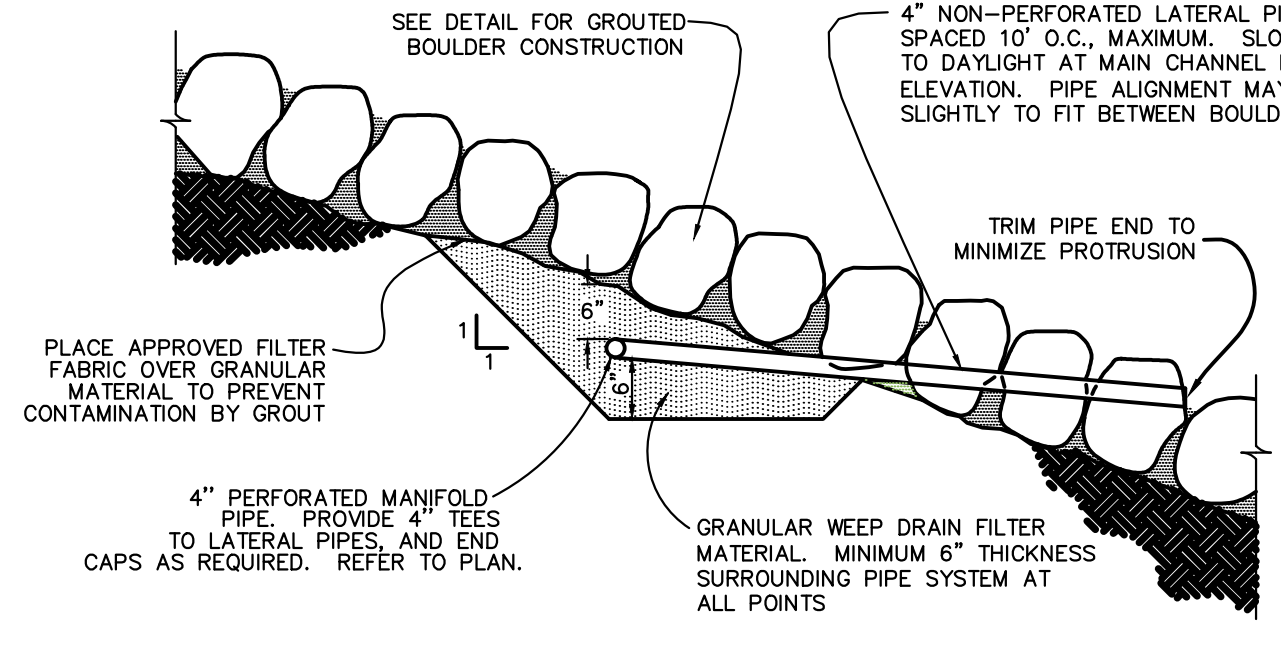
1. ALL GROUT SHALL BE DELIVERED BY MEANS OF A LOW PRESSURE (LESS THAN 10 PSI) GROUT PUMP USING A 2" DIAMETER NOZZLE.
2. FULL DEPTH PENETRATION OF THE GROUT INTO THE BOULDERS SHALL BE REQUIRED. TO ACHIEVE THIS, A PENCIL VIBRATOR IS TO BE USED.
3. AFTER PLACEMENT, EXPOSED BOULDER FACES SHALL BE CLEANED WITH A WET BROOM.
4. ALL GROUT BETWEEN BOULDERS SHALL BE FINISHED WITH A BROOM FINISH.
5. ALL GROUT SHALL BE SPRAYED WITH A CLEAR LIQUID MEMBRANE CURING COMPOUND AS SPECIFIED IN ASTM C-309.
6. SPECIAL PROCEDURES WILL BE REQUIRED FOR GROUT PLACEMENT WHEN THE AIR TEMPERATURES ARE LESS THAN 40°F OR GREATER THAN 90°F. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE DESIGN ENGINEER OF THE PROCEDURES TO BE USED FOR PROTECTING THE GROUT.
7. SLOPING GROUTED BOULDER DROPS TO BE CONSTRUCTED OF SOMEWHAT UNIFORM BOULDERS WITH AN AVERAGE DIMENSION OF 24". ALL BOULDERS SHALL BE GREATER THAN 18" AVERAGE DIMENSION.
8. BOULDERS ARE PLACED ONE BOULDER DEEP WITH TOPS OF BOULDERS DESCENDING AT IRREGULAR INTERVALS.
9. ROCKS SHALL BE SELECTED AND PLACED SUCH THAT A RELATIVELY FLAT HORIZONTAL SURFACE IS EXPOSED.
10. DURING ROCK PLACEMENT CONTRACTOR SHALL COORDINATE LOCATION AND ORIENTATION WITH OWNER AND ENGINEER.
11. PRIOR TO GROUTING ROCK IN PLACE, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER FOR FINAL APPROVAL.
12. AFTER INSPECTION AND APPROVAL, GROUT SHALL BE ADDED TO A LEVEL APPROXIMATELY 6" BELOW TOP OF SURFACE OF BOULDERS.
13. GROUTED BASIN WILL NOT BE DRAINED AND WILL BE PERMITTED TO COLLECT SEDIMENT DEPOSITS.
14. UNGROUTED RIP-RAP DOWNSTREAM OF STRUCTURE TO BE 1.75" THICK LAYER AND PLACED ON 6" TYPE II BEDDING.

STA	Df
42+03.56	23.90'
48+53.24	19.36'

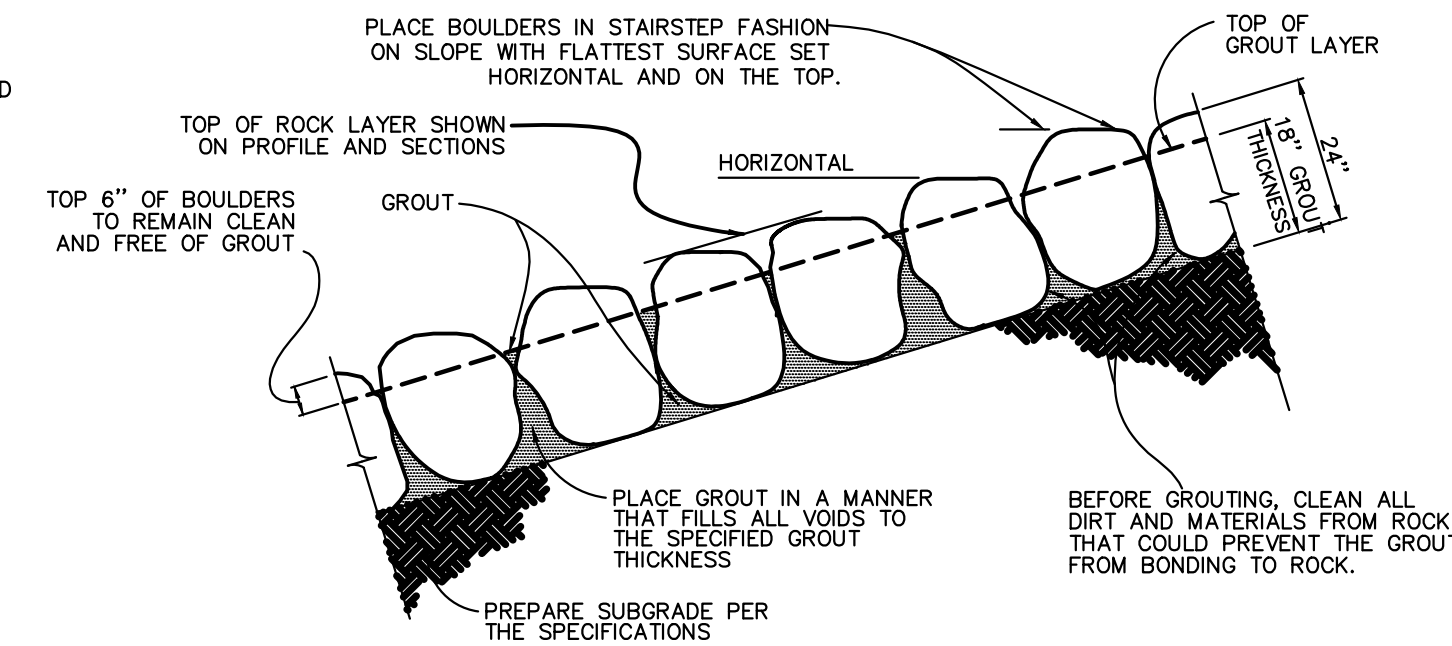
DROP FACE TABLE



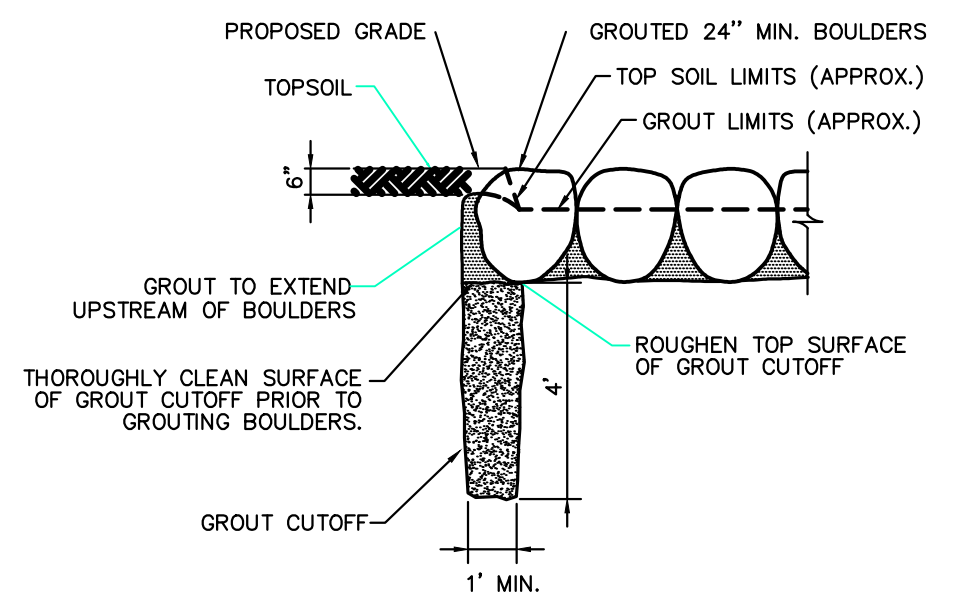
DROP STRUCTURE PROFILE N.T.S.



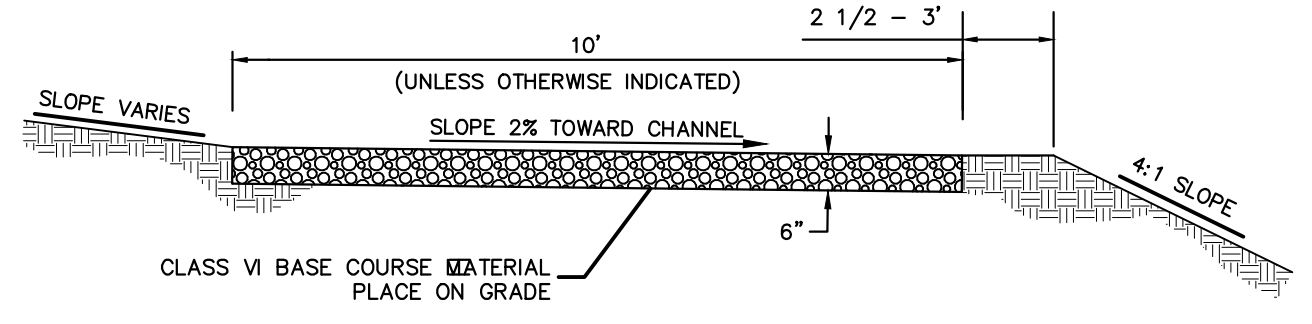
WEEP DRAIN SYSTEM DETAIL 2 N.T.S.



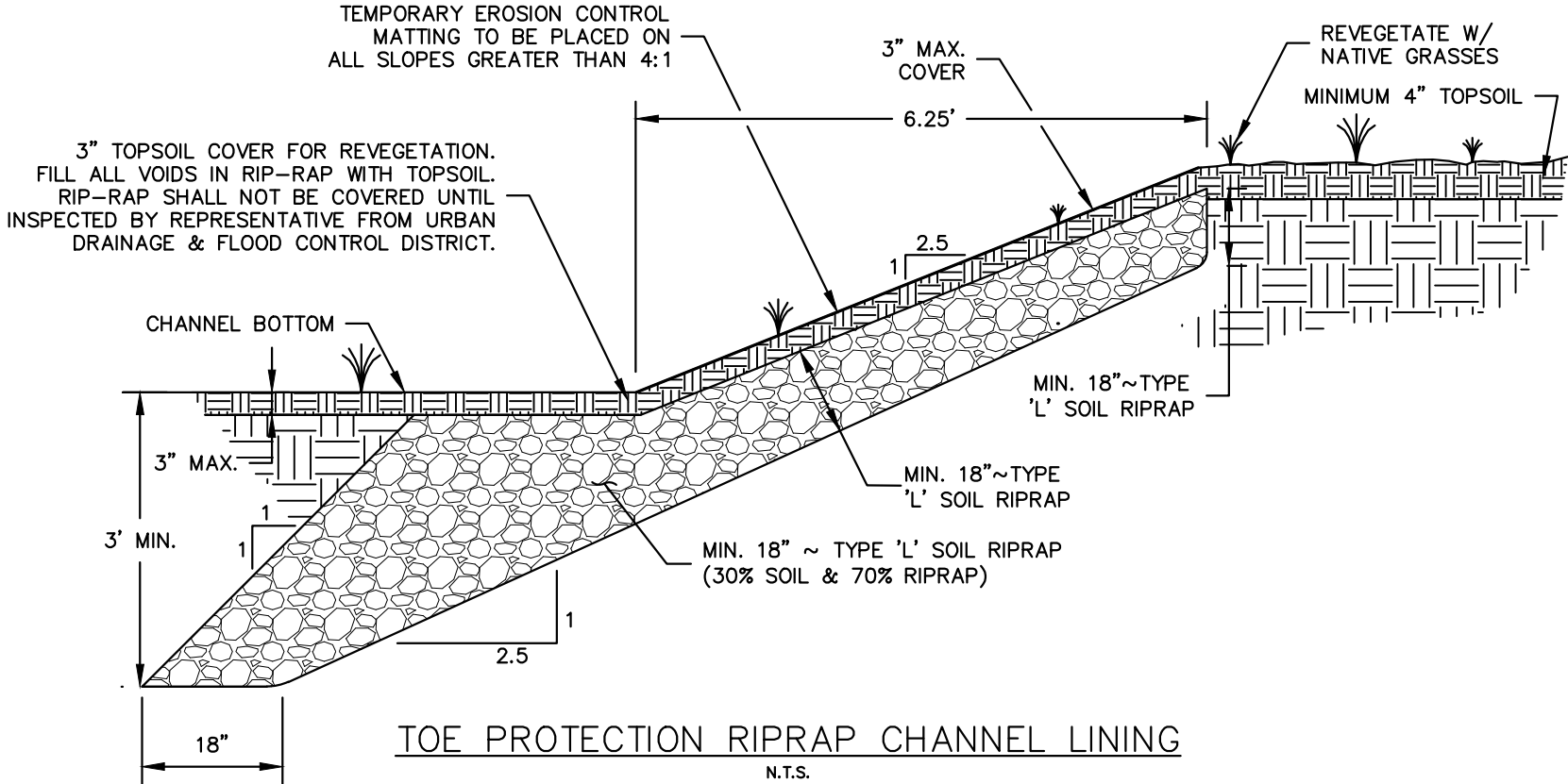
GROUTED BOULDER PLACEMENT DETAIL 3 N.T.S.



GROUT CUTOFF DETAIL 1 N.T.S.



10' MAINTENANCE TRAIL N.T.S.



TOE PROTECTION RIPRAP CHANNEL LINING N.T.S.

DATE	REVISIONS
11/2015	1ST SUBMITTAL

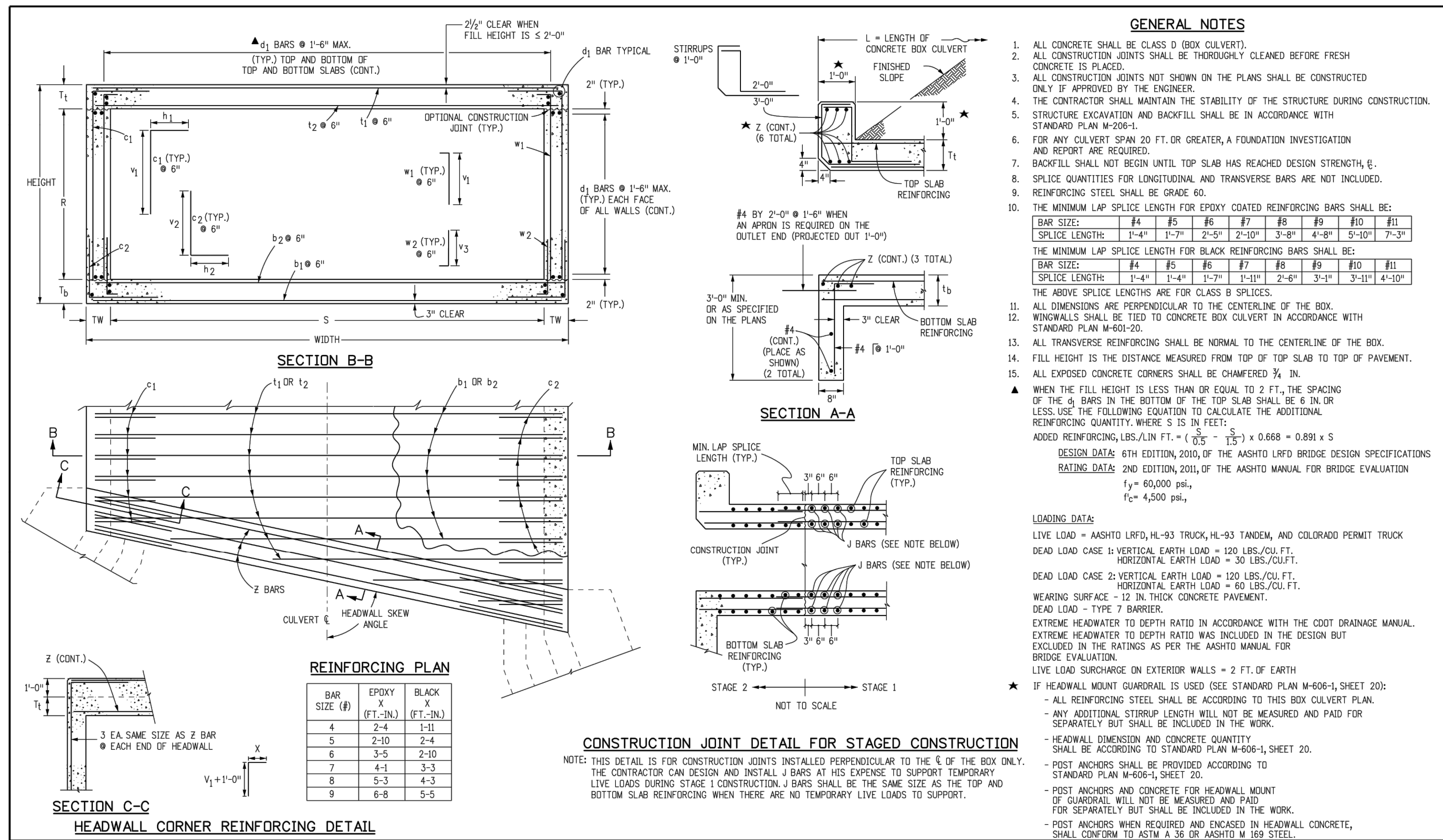
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COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY  
 TOWN OF PARKER, COLORADO  
 GENERAL DETAILS

PROJ. MGR.: RLB  
 PROJ. ASSOC.: ASD  
 DRAWN BY: ETG  
 DATE: 11/2015  
 SHEET  
**29 OF 31**  
 CLOPKC3

PENDING APPROVAL

Plotted: 12/4/2015 9:37 AM Data Name: e:\clients\3\CompSouth02-CompSouth02-CompSouth02-Drainage-Gen Details-1.dwg Updated By: ddot



**GENERAL NOTES**

- ALL CONCRETE SHALL BE CLASS B (BOX CULVERT).
- ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS PLACED.
- ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE CONSTRUCTED ONLY IF APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
- STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH STANDARD PLAN M-200-1.
- FOR ANY CULVERT SPAN 20 FT. OR GREATER, A FOUNDATION INVESTIGATION AND REPORT ARE REQUIRED.
- BACKFILL SHALL NOT BEGIN UNTIL TOP SLAB HAS REACHED DESIGN STRENGTH.
- SPLICE QUANTITIES FOR LONGITUDINAL AND TRANSVERSE BARS ARE NOT INCLUDED.
- REINFORCING STEEL SHALL BE GRADE 60.
- THE MINIMUM LAP SPACE LENGTH FOR EPOXY COATED REINFORCING BARS SHALL BE:
  - BAR SIZE: #4 #5 #6 #7 #8 #9 #10 #11
  - SPLICE LENGTH: 1'-4" 1'-7" 2'-5" 2'-10" 3'-8" 4'-8" 5'-10" 7'-3"
- THE MINIMUM LAP SPACE LENGTH FOR BLACK REINFORCING BARS SHALL BE:
  - BAR SIZE: #4 #5 #6 #7 #8 #9 #10 #11
  - SPLICE LENGTH: 1'-4" 1'-7" 1'-7" 1'-11" 2'-6" 3'-1" 3'-1" 4'-10"
- THE ABOVE SPLICE LENGTHS ARE FOR CLASS B SPLICES.
- ALL DIMENSIONS ARE PERPENDICULAR TO THE CENTERLINE OF THE BOX.
- WINDOW WALLS SHALL BE TIED TO CONCRETE BOX CULVERT IN ACCORDANCE WITH STANDARD PLAN M-601-20.
- ALL TRANSVERSE REINFORCING SHALL BE NORMAL TO THE CENTERLINE OF THE BOX.
- FILL HEIGHT IS THE DISTANCE MEASURED FROM TOP OF TOP SLAB TO TOP OF PAVEMENT.
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4" IN.
- WHEN THE FILL HEIGHT IS LESS THAN OR EQUAL TO 2 FT., THE SPACING OF THE 5 BARS IN THE BOTTOM OF THE TOP SLAB SHALL BE 6 IN. OR LESS USE THE FOLLOWING EQUATION TO CALCULATE THE ADDITIONAL REINFORCING QUANTITY, WHERE S IS IN FEET:
 
$$\text{ADDED REINFORCING, LBS./LIN. FT.} = \left( \sqrt{\frac{S}{12}} - \frac{1}{3} \right) \times 0.688 \times 0.89 \times S$$
- DESIGN DATE: 6TH EDITION, 2010, OF THE ASHTO LRFD BRIDGE DESIGN SPECIFICATIONS  
 RATING DATE: 2ND EDITION, 2010, OF THE ASHTO MANUAL FOR BRIDGE EVALUATION  
 $f'_c = 60,000 \text{ psi}$   
 $f'_s = 4,500 \text{ psi}$
- LOADING DATA:  
 LIVE LOAD = ASHTO LRFD, HL-93 TRUCK, HL-93 TANDEM, AND COLORADO PERMIT TRUCK  
 DEAD LOAD CASE 1: VERTICAL EARTH LOAD = 120 LBS./CU. FT.  
 HORIZONTAL EARTH LOAD = 30 LBS./CU. FT.  
 DEAD LOAD CASE 2: VERTICAL EARTH LOAD = 120 LBS./CU. FT.  
 HORIZONTAL EARTH LOAD = 60 LBS./CU. FT.  
 WEARING SURFACE = 2" THICK CONCRETE PAVEMENT.  
 DEAD LOAD = TYPE 7 BARRIER.  
 EXTREME HEADWATER TO DEPTH RATIO IN ACCORDANCE WITH THE COOT DRAINAGE MANUAL.  
 EXTREME HEADWATER TO DEPTH RATIO SHALL BE INCLUDED IN THE DESIGN BUT EXCLUDED IN THE RATINGS AS PER THE ASHTO MANUAL FOR BRIDGE EVALUATION.  
 LIVE LOAD SURCHARGE ON EXTERIOR WALLS = 2 FT. OF EARTH  
 IF HEADWATER MOUNT GUARDRAIL IS USED (SEE STANDARD PLAN M-601-1, SHEET 20):  
 - ALL REINFORCING STEEL SHALL BE ACCORDING TO THIS BOX CULVERT PLAN.  
 - ANY ADDITIONAL STIRRUP LENGTH WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE DESIGN.  
 - HEADWATER DIMENSION AND CONCRETE QUANTITY SHALL BE ACCORDING TO STANDARD PLAN M-601-1, SHEET 20.  
 - POST ANCHORS SHALL BE PROVIDED ACCORDING TO STANDARD PLAN M-601-1, SHEET 20.  
 - POST ANCHORS AND CONCRETE FOR HEADWATER MOUNT OF GUARDRAIL WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.  
 - POST ANCHORS WHEN REQUIRED AND ENCASED IN HEADWATER CONCRETE, SHALL CONFORM TO ASTM A 36 OR ASHTO M 608 STEEL.

**CONSTRUCTION JOINT DETAIL FOR STAGED CONSTRUCTION**

NOTE: THIS DETAIL IS FOR CONSTRUCTION JOINTS INSTALLED PERPENDICULAR TO THE 6 OF THE BOX ONLY. THE CONTRACTOR CAN DESIGN AND INSTALL 3 BARS AT HIS EXPENSE TO SUPPORT TEMPORARY LIVE LOADS DURING STAGE 1 CONSTRUCTION. BARS SHALL BE THE SAME SIZE AS THE TOP AND BOTTOM SLAB REINFORCING WHEN THERE ARE NO TEMPORARY LIVE LOADS TO SUPPORT.

**SINGLE CONCRETE BOX CULVERT DIMENSIONS, QUANTITIES & RATING FACTORS (EXCLUDING HEADWALL & TOEWALL QUANTITIES)**

SPAN (S)	HEIGHT (H)	WIDTH (W)	THICKNESS (T)	RATING FACTORS	QUANTITIES		RATING FACTORS	
					REBAR QUANT.	CONCRETE QUANT.	REBAR QUANT.	CONCRETE QUANT.
6	4	4	23.8	4	23.2	6	4	34.6
8	4	4	23.0	5	28.8	7	4	44.0
10	4	4	28.5	6	35.1	9	4	68.7
12	4	4	35.3	6	43.4	9	5*	71.7
14	4	4	34.2	7	43.5	8	5*	88.7
16	4	4	33.1	8	54.0	8	5*	88.7
18	4	4	35.5	9	63.3	8	5*	88.7
20	4	4	39.3	8	63.3	8	5*	88.7

CONCRETE QUANTITY = 0.086 CU.YDS./LIN.FT.

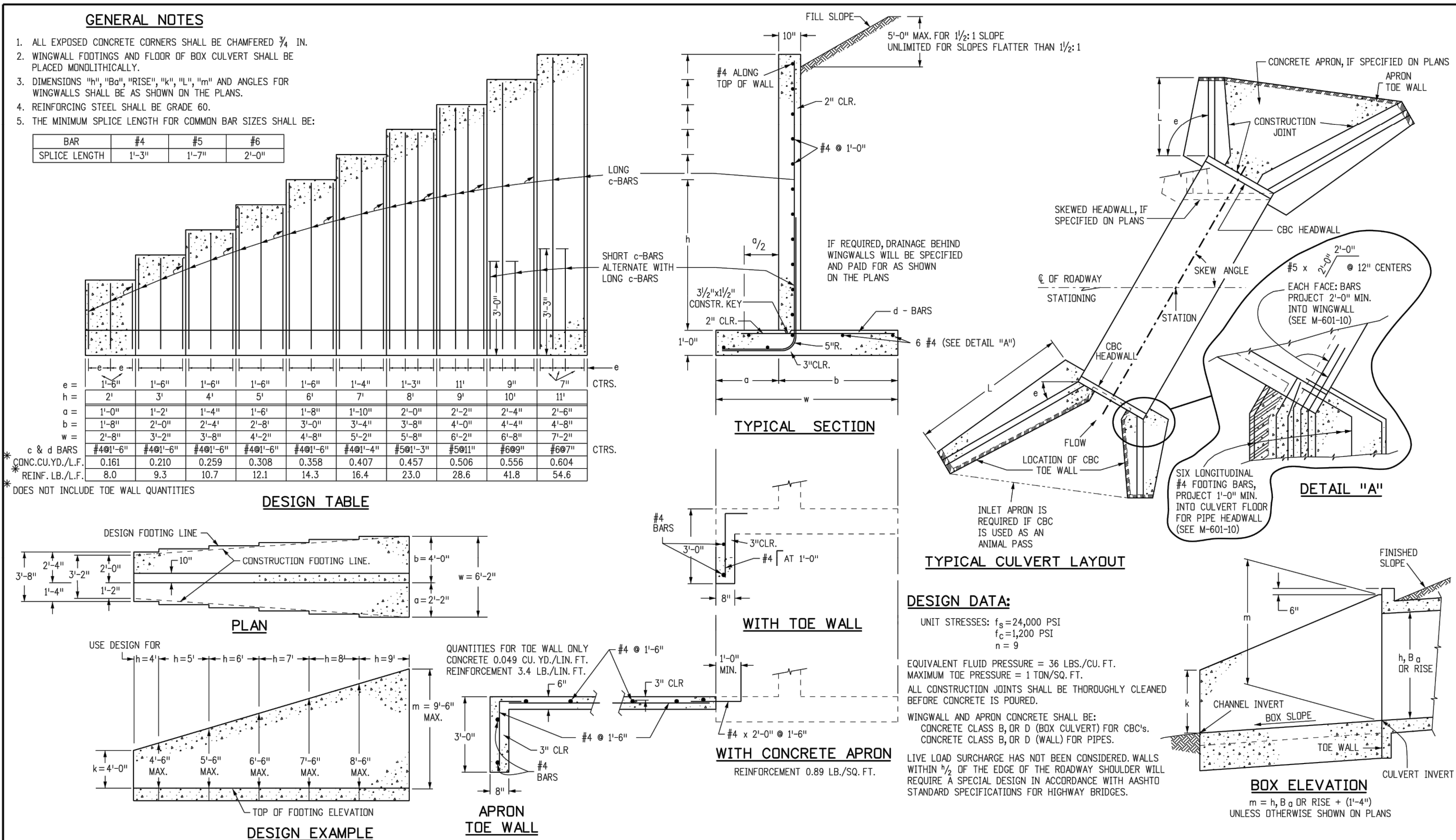
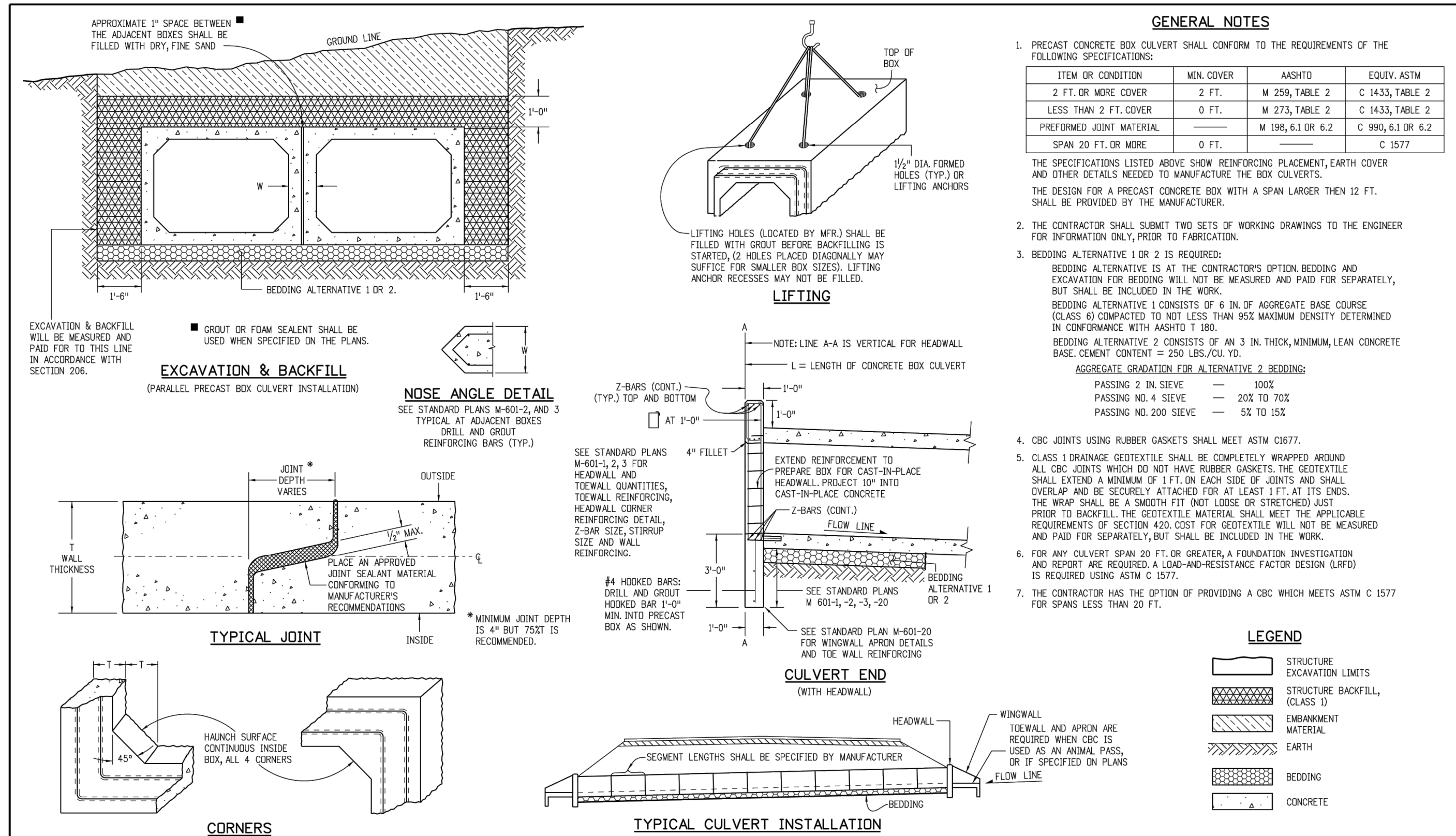
**HEADWALL AND TOEWALL QUANTITIES**

HEADWALL SKEW ANGLE	SPAN - S	Z	90° TO 75°		74° TO 60°		59° TO 45°	
			STIRRUPS	REBAR QUANT.	STIRRUPS	REBAR QUANT.	STIRRUPS	REBAR QUANT.
6	4	4	23.8	4	23.2	6	4	34.6
8	4	4	23.0	5	28.8	7	4	44.0
10	4	4	28.5	6	35.1	9	4	68.7
12	4	4	35.3	6	43.4	9	5*	71.7
14	4	4	34.2	7	43.5	8	5*	88.7
16	4	4	33.1	8	54.0	8	5*	88.7
18	4	4	35.5	9	63.3	8	5*	88.7
20	4	4	39.3	8	63.3	8	5*	88.7

**NOTES**

- 6 INCH SPACING AT EACH END OF THE SPAN FOR A DISTANCE OF 1/4 OF THE SPAN LENGTH 12 INCH SPACING ELSEWHERE.
- QUANTITIES ARE PER LINEAR FOOT (OF HEADWALL) FOR ONE HEADWALL AND TOEWALL AND INCLUDE ALL HEADWALL AND TOEWALL REINFORCING STEEL QUANTITY INCLUDED WAS CALCULATED PER 1 FT. STRIP. SKEW ANGLE MAY VARY QUANTITIES SHALL BE PAID FOR AS SHOWN ON THE PLANS.
- A SKEWED HEADWALL IS NOT RECOMMENDED FOR THESE SPANS. A SPECIAL DESIGN IS REQUIRED.
- FOR HEADWALL AND TOEWALL DETAILS SEE SHEET 1.
- WHEN THE FILL HEIGHT IS LESS THAN OR EQUAL TO 2 FT. 0 IN. ALL REINFORCING BARS IN THE HEADWALL, ALL REINFORCING BARS DESIGNATED BY AN ASTERISK (\*), AND THE 6 BARS IN THE TOP MAT OF THE TOP SLAB SHALL BE EPOXY COATED.
- REINFORCING QUANTITIES INCLUDE BOTH EPOXY-COATED AND UNCOATED BARS.
- WHEN AN R (RISER) IS LESS THAN 6 FT. IS REQUIRED, USE THE BAR SIZES AND THE SLAB AND WALL THICKNESSES FOR THE 6 FT. RISE (IF AVAILABLE ON THE TABLE).
- THE SIZE OF 4 BARS IS #4. THE NUMBER OF BARS REQUIRED IS LISTED.
- LIVE LOAD IS NEGLECTED AS PER ASHTO LRFD SECTION 3.6.1.2.6.

**Computer File Information** | **Sheet Revisions** | **Colorado Department of Transportation** | **SINGLE CONCRETE BOX CULVERT** | **STANDARD PLAN NO. M-601-1** | **Sheet No. 1 of 2**



**GENERAL NOTES**

- EXCAVATION AND BACKFILL PATTERNS DIFFERENT FROM THOSE INDICATED ON THESE SHEETS WILL BE SHOWN ELSEWHERE ON THE PLANS.
- EXCAVATION FOR CHANNEL CHANGE OR CHANNEL IMPROVEMENT WILL BE EITHER UNCLASSIFIED EXCAVATION OR MUCK EXCAVATION AND WILL BE NOTED ON THE PLANS. EXCAVATION FROM THE CHANNEL FLOWLINE TO THE DEPTH REQUIRED FOR THE NEW STRUCTURE AND INCIDENTAL CHANNEL EXCAVATION WILL BE PAID FOR AS STRUCTURE EXCAVATION.
- STRUCTURE FITTINGS WHICH ARE LOCATED IN ROCK SHALL BE POURED OUT TO UNDISTURBED ROCK WITHOUT FORMING IN CONFORMANCE WITH SUBSECTION 601.09(D).
- STRUCTURAL PLATE CULVERTS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS.
- $B_o$  EQUALS THE INSIDE DIAMETER OF A PIPE AND  $B_c$  EQUALS THE OUTSIDE DIAMETER OF A PIPE. FOR THIN WALLED PIPES, IT IS ASSUMED THAT  $B_o = B_c$ .
- APPROXIMATE STRUCTURE EXCAVATION AND BACKFILL QUANTITIES, UP TO 1 FT. OVER THE PIPE WILL BE SHOWN ON THE PLANS, FOR INFORMATION ONLY.

**LEGEND**

- STRUCTURE EXCAVATION LIMITS
- STRUCTURE BACKFILL, CLASS 1 OR 2, AS SHOWN ON PLANS
- STRUCTURE BACKFILL, CLASS 1 OR 2, AS SHOWN ON PLANS
- EMBANKMENT MATERIAL
- EARTH
- ROCK
- BEDDING
- CONCRETE
- WHEN FLOW LINE OF CULVERT IS LESS THAN  $0.3 B_c$  BELOW THE ORIGINAL GROUND LINE, EMBANKMENT SHALL BE BUILT UP TO  $0.3 B_c$  ABOVE THE FLOW LINE AND TRENCH EXCAVATED TO THE BOTTOM OF PIPE OR AS SHOWN.

**CONDUIT WITH END SECTIONS**

**HEADWALL**

**END OF PIPE**

**Computer File Information**

Creation Date: 07/04/12	Initials: DD
Last Modification Date: 07/04/12	Initials: LTA
Full Path: www.coloradodot.info/business/designsupport	
Drawing File Name: Z06010102.dgn	
CAD Ver: MicroStation V8	Scale: Not to Scale
Units: English	

**Sheet Revisions**

Date	Comments

**Colorado Department of Transportation**

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**Project Development Branch DD/LTA**

**EXCAVATION AND BACKFILL FOR STRUCTURES**

**STANDARD PLAN NO. M-206-1**

Issued By: Project Development Branch July 4, 2012

Sheet No. 1 of 2

**STRUCTURE EXCAVATION MEASUREMENT FOR PIPE CULVERTS**

**PLAN**

**PROFILE**

**STRUCTURE EXCAVATION MEASUREMENT FOR CONCRETE BOX CULVERTS**

**PLAN**

**PROFILE**

**RETAINING WALL IN CUT & IN PARTIAL CUT**

**WINGWALL**

**LEGEND**

- STRUCTURE EXCAVATION LIMITS
- STRUCTURE BACKFILL, CLASS 1 OR 2, AS SHOWN ON PLANS
- CONCRETE

**Computer File Information**

Creation Date: 07/04/12	Initials: DD
Last Modification Date: 07/04/12	Initials: LTA
Full Path: www.coloradodot.info/business/designsupport	
Drawing File Name: Z06010202.dgn	
CAD Ver: MicroStation V8	Scale: Not to Scale
Units: English	

**Sheet Revisions**

Date	Comments

**Colorado Department of Transportation**

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**Project Development Branch DD/LTA**

**EXCAVATION AND BACKFILL FOR STRUCTURES**

**STANDARD PLAN NO. M-206-1**

Issued By: Project Development Branch July 4, 2012

Sheet No. 2 of 2

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DATE	REVISIONS	EG
11/2015	1ST SUBMITTAL	

**COMPARK VILLAGE SOUTH GREEN ACRES TRIBUTARY**

**TOWN OF PARKER, COLORADO**

**CDOT DETAILS**

PROJ MGR: **RLB**

PROJ ASSOC: **ASD**

DRAWN BY: **ETG**

DATE: **11/2015**

SHEET

**31** OF **31**

CLCPKC3

PENDING APPROVAL