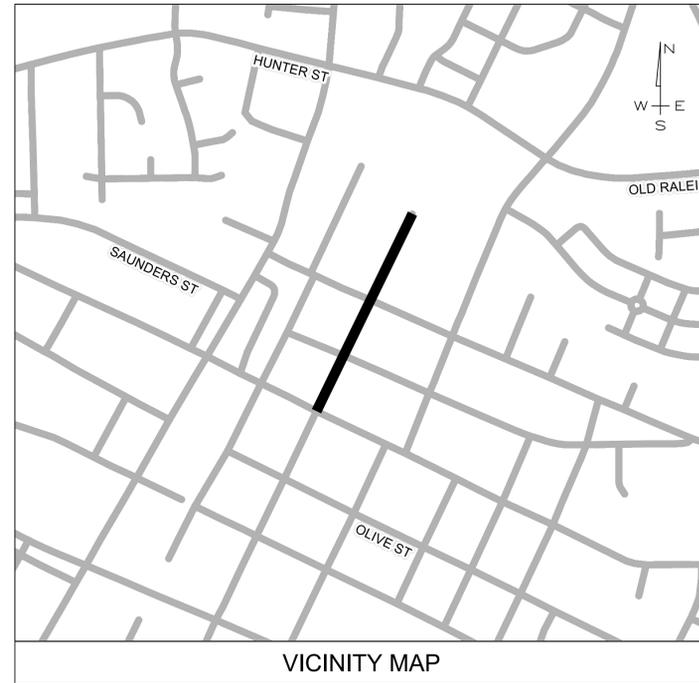


# TOWN OF APEX TRANSPORTATION & INFRASTRUCTURE DEVELOPMENT

STATE	PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
NC		1	
STATE PROJECT NO.	F.A. PROJECT NO.	DESCRIPTION	

## N HUGHES ST SIDEWALK



VICINITY MAP

LOCATION: E CHATHAM ST TO APEX COMMUNITY CENTER

TYPE OF WORK: GRADING, STORM DRAINAGE, PAVING,  
CONCRETE GUTTER, CONCRETE SIDEWALK



LINEAR PROJECT STORMWATER MANAGEMENT NOTE  
THIS PROJECT MEETS THE SPIRIT AND INTENT OF SECTION E-5 OF THE NORTH CAROLINA DIVISION OF ENVIRONMENTAL QUALITY (DEQ) BMP MANUAL FOR LINEAR TRANSPORTATION PROJECTS. THE TOWN OF APEX IS THE OWNER AND DEVELOPER OF THIS SIDEWALK WHICH IS NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT. THE SIDEWALK WILL BE CONSTRUCTED FOR THE PURPOSES OF PROVIDING A LINEAR PEDESTRIAN CORRIDOR FOR PUBLIC BENEFIT AS PART OF THE TOWN OF APEX TRANSPORTATION PLAN.

Latitude	35.731194
Longitude	-78.848475
Watershed Protection District	Secondary
Grading	Mass
Total Disturbed Area	0.35 acres
Standard Specifications & Details	September 25, 2024

Type	Length (lf)
sidewalk	1332
storm drainage	12
curb & gutter	1300

Prepared in the office of:  
TOWN OF APEX  
TRANSPORTATION &  
INFRASTRUCTURE DEVELOPMENT  
105-B UPCHURCH ST  
APEX, NC 27502  
919-249-3417

**PRELIMINARY  
DO NOT USE  
FOR  
CONSTRUCTION**

P.E.  
Project Engineer



## TOWN OF APEX CONSTRUCTION SEQUENCE:

*The following begins only after Construction Plans are approved, signed by Town staff and copies are received.*

1. Through Development Services at (919) 372-7467, schedule a pre-construction meeting with Town staff.
2. Request an invoice for the S&E performance guarantee from Development Services at (919) 249-3355.
3. Submit the applicable S&E performance guarantee to Development Services at 105-B Upchurch Street, Apex, NC 27502. The erosion control **Letter of Plan Approval** will not be issued until the performance guarantee has been submitted.
4. Request a **Letter of Plan Approval** for sedimentation and erosion control measures from Water Resources staff at (919) 372-7470. Submit the **Financial Responsibility/Ownership (FRO)** form and **Request for Plan Approval** form at or within 7 days prior to the pre-construction meeting.
5. Complete and submit an electronic **Notice of Intent** (e-NOI) form with NCDEMLR requesting a **Certificate of Coverage (COC)** under the NCG01 Construction Stormwater General Permit. Visit the following website: <https://deq.nc.gov/about/divisions/energy-mineral-land-resources/energy-mineral-land-permits/stormwater-permits/construction-sw>
6. Complete a Grading Permit Application and receive a Grading Permit from the Building Inspections & Permitting Department as required by the North Carolina Building Code Appendix J for Grading. **Both the Grading Permit and Certificate of Coverage from NCDEMLR must be submitted to the Environmental Field Services Supervisor prior to the commencement of any land disturbance activity.**
7. Complete a **Tree/Protection Fencing Installation Permit Application** through the Planning Department.
8. Have a surveyor flag property lines, easements, buffers, tree protection areas, and flag the protection limits.
9. Contact an Apex Planning Department Zoning Compliance Officer at (919) 249-3426 to request approval for tree protection fencing locations.
10. Install approved tree protection fencing, signs, and/or any other protection measures that may be required. Call Planning at (919) 249-3426 for a final inspection of protection measures. Planning will forward approval to Water Resources Erosion Control field staff.
11. Install gravel construction entrance, temporary diversions, silt fencing, sediment basins, bypass channels, and/or other measures as shown on the approved plans. Clear only as necessary to install these devices.
12. When completed, call Water Resources Erosion Control field staff at (919) 372-7470 for an on-site inspection and to request a **Certificate of Compliance**. Water Resources will also forward a copy to the Building Inspections & Permitting Department.
13. Post Grading Permit prominently on site at all times.
14. Begin clearing, logging, grubbing, and rough grade of the site in accordance with the approved grading plan.
15. Stockpile a sufficient amount of topsoil to cover 3 inches over landscaped areas at the end of the project.
16. Install storm sewer, if applicable, and protect inlets with inlet protection devices, sediment devices, and/or other approved measures as shown on plans. Maintain S&E measures as needed.
17. After completion of any phase of grading or when land-disturbing activities have temporarily ceased, establish groundcover on swales and ditches and graded slopes steeper than 3:1 within 7 calendar days; slopes that are 3:1 or flatter must establish groundcover within 14 calendar days.
18. Stabilize site as areas are brought up to finished grade with vegetation or paving.
19. Prior to plat approval, all disturbed areas both public and private, must be properly stabilized. All temporary erosion control measures must be installed, be functioning properly and be maintained for the entire area contained within the plat.
20. Flush and clean all stormwater system pipes. Clean and remove sediment from temporary sediment holding devices. Follow the SCM Construction Sequence found on the Grading and/or SCM Detail sheet on the Construction Plan set.
21. Remove all temporary diversions, silt fencing, sediment basins, etc. and provide adequate cover or pave any resulting bare areas. All permanent erosion control devices should be installed at this point.

## GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL ILLUSTRATED KNOWN UNDERGROUND ELEMENTS. ADDITIONALLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXERCISING REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE ILLUSTRATED DESIGN.
  2. PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC, AND ALL OF THE OWNER'S FACILITIES. SHOULD DAMAGES OCCUR, CONTRACTOR SHALL REPAIR IMMEDIATELY AS DIRECTED BY THE ENGINEER.
  3. CONTRACTOR SHALL HOLD HARMLESS THE OWNER AND THE ENGINEER FOR DAMAGES, INJURIES OR OTHER ACCIDENTS WHICH OCCUR DURING THESE CONSTRUCTION ACTIVITIES.
  4. ALL ELEVATIONS ARE IN REFERENCE TO DESIGNATED BENCHMARKS.
  5. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATION OF ALL ILLUSTRATED CONSTRUCTION ACTIVITIES AT THE JOB SITE.
  6. CONTRACTOR SHALL PROVIDE EXCAVATION AND TRAFFIC CONTROL AS REQUIRED BY LOCAL AUTHORITIES AND ALL APPLICABLE OSHA REGULATIONS.
  7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT HIS EXPENSE.
  8. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION ADJUSTMENTS OF ALL EXISTING VAULTS (REGARDLESS OF FUNCTION), METER BOXES, FIRE HYDRANTS, CLEAN OUTS, MANHOLES ETC. TO MATCH FINISHED GRADES AND SITE PLAN. ALL SUCH WORK SHALL BE COORDINATED WITH THE ENGINEER.
  9. UTILIZE SIGNS, BARRICADES, FLAG MEN, OR LAW ENFORCEMENT, PER NCDOT STANDARD SPECIFICATIONS AND STANDARD DRAWINGS, AS REQUIRED TO ENSURE THE SAFETY OF ALL VEHICULAR AND PEDESTRIAN TRAFFIC DURING ALL CONSTRUCTION ACTIVITIES.
  10. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND ADJACENT PROPERTY OWNERS AS REQUIRED FOR WORK OUTSIDE OF PROPERTY LINES.
  11. UNDER ABSOLUTELY NO CIRCUMSTANCES SHALL ANY UNMANNED EXCAVATION BE LEFT OPEN OR UNPROTECTED DURING NON-WORKED HOURS. UTILIZE SIGNS, BARRICADES, ETC. TO ENSURE THE SAFETY OF THE GENERAL PUBLIC.
  12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL WORK AS ILLUSTRATED ON PLANS. IF EXISTING CONDITIONS DIFFER FROM THOSE ILLUSTRATED ON PLANS, NOTIFY ENGINEER PRIOR TO CONSTRUCTION ACTIVITIES.
  13. VERIFY ALL DIMENSIONS AND GRADES AT THE JOB SITE. IF DIFFERENCES ARE FOUND, NOTIFY ENGINEER SO THAT MODIFICATIONS TO THESE DRAWINGS CAN BE MADE.
  14. ALL WORK TO BE PERFORMED ACCORDING TO OSHA SAFETY REGULATIONS.
  15. THE CONTRACTOR SHALL PROVIDE 24 HOURS NOTICE TO THE TOWN OF APEX
  16. FOR ALL REQUIRED INSPECTIONS.
  17. ALL UTILITIES OR STRUCTURES NOT DESIGNATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE.
  18. ALL DEMOLITION WORK SHALL BE PERFORMED WITH "DUE CARE AND DILIGENCE" SO AS TO PREVENT THE ARBITRARY DESTRUCTION OR INTERRUPTION OF CONCEALED UTILITIES WHICH ARE INTENDED TO REMAIN IN USE, THE ROUTING OF WHICH COULD NOT BE PREDETERMINED UNTIL DEMOLITION WAS STARTED. ALL SUCH DISCOVERIES OF UTILITIES DURING THE DEMOLITION PROCESS WHICH ARE IN A LOCATION DIFFERENT FROM THAT INDICATED OR ARE UNIDENTIFIED, SHALL BE REPORTED TO THE ENGINEER
- AND OWNER BEFORE REMOVAL FOR FINAL DISPOSITION.
19. ALL WASTE MATERIAL GENERATED FROM DEMOLITION WORK SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH TOWN OF APEX REGULATIONS.
  20. SALVAGEABLE FILL MATERIALS FROM SITE DEMOLITION DETERMINED TO BE ACCEPTABLE BY AN INDEPENDENT SOILS TESTING LABORATORY SHALL BE UTILIZED FOR FILL MATERIAL WHERE APPROPRIATE.
  21. ANY NOTE, OR REFERENCE TO ANY ELEMENT, WHICH DOES NOT SPECIFY ACTION BY THE CONTRACTOR SHALL BE CONSTRUED AS INFORMATION ONLY.
  22. ALL STRUCTURES/UTILITIES DESIGNATED FOR MODIFICATION SHALL BE PROTECTED BY THE CONTRACTOR DURING CONSTRUCTION.
  23. CONTRACTOR SHALL NOTIFY NCDOT DIVISION 5, DISTRICT 1 ENGINEER AT (919) 814-6115, IN ACCORDANCE WITH ALL DRIVEWAY PERMITS & ENCROACHMENT AGREEMENTS, PRIOR TO BEGINNING ANY WORK WITHIN THE STATE MAINTAINED RIGHT OF WAY.

## SHEET INDEX

SHEET#	SHEET
1	TITLE SHEET
1A	SHEET INDEX
2A	TYPICAL SECTIONS
2B-2D	DETAILS
3	[NOT USED]
4 THRU 6	PLAN SHEETS
X-1 THRU X-5	CROSS SECTIONS

\* \* \* CAUTION \* \* \*

N.C. ONE CALL: UTILITY LOCATOR SERVICE

3 DAYS BEFORE DIGGING CALL  
TOLL FREE 1-800-632-4949

A ONE CALL SYSTEM FOR COMMUNITY AND JOB SAFETY.

\* \* \* CAUTION \* \* \*

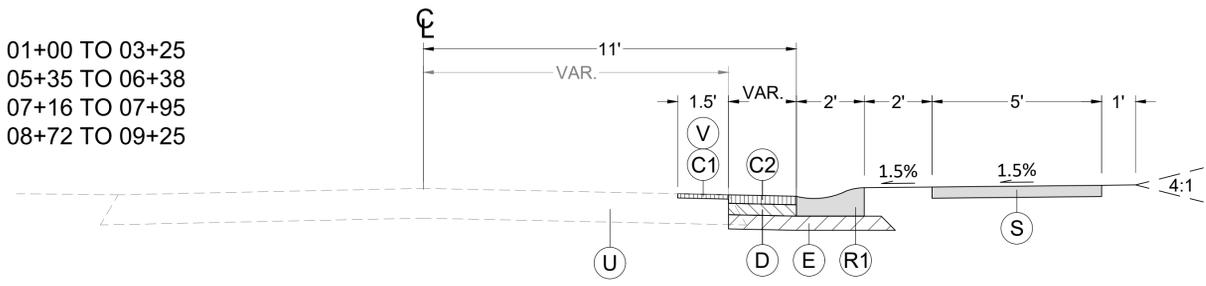
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.



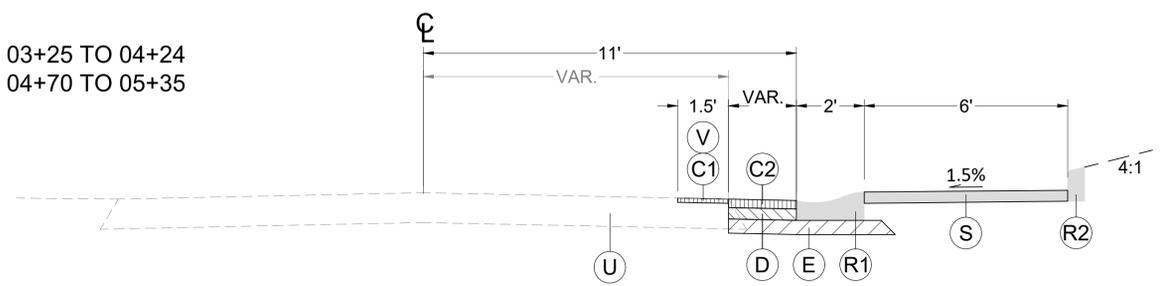
**PRELIMINARY  
DO NOT USE  
FOR  
CONSTRUCTION**

**TYPICAL SECTIONS**

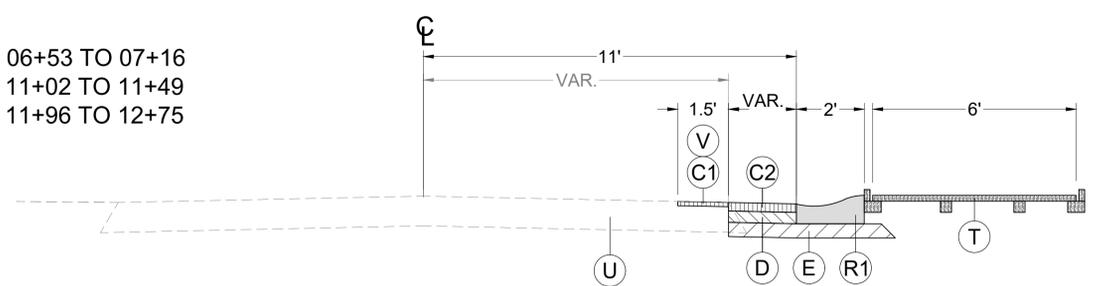
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05+35 TO 06+38  
07+16 TO 07+95  
08+72 TO 09+25



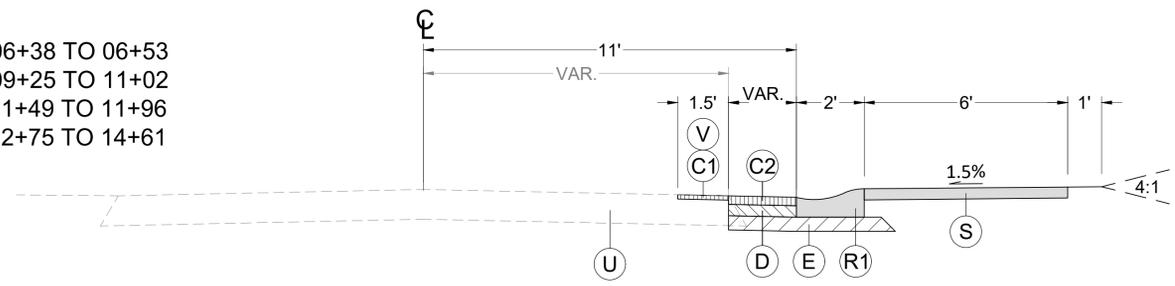
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04+70 TO 05+35



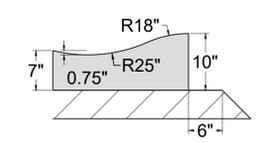
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11+02 TO 11+49  
11+96 TO 12+75



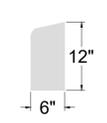
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09+25 TO 11+02  
11+49 TO 11+96  
12+75 TO 14+61



VALLEY GUTTER

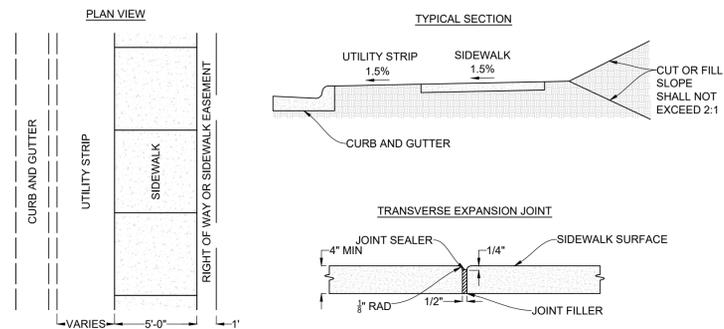
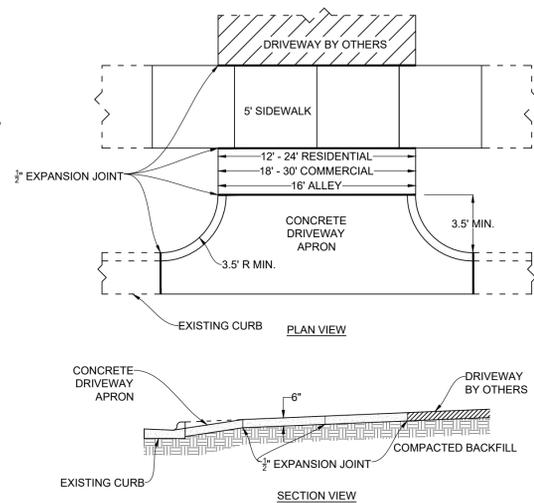


HEADER CURB



PAVEMENT SCHEDULE	
C1	ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, 1 1/2 INCH DEPTH
C2	ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, 3 INCH DEPTH
D	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, 4 INCH DEPTH
E	ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, 5 INCH DEPTH
R1	24 INCH CONCRETE VALLEY GUTTER
R2	6 INCH HEADER CURB
S	CONCRETE SIDEWALK, 4 INCH DEPTH, 6 INCH DEPTH AT DRIVEWAYS
T	TREX BOARDWALK
U	EXISTING PAVEMENT
V	MILLING, 1 1/2 INCH DEPTH

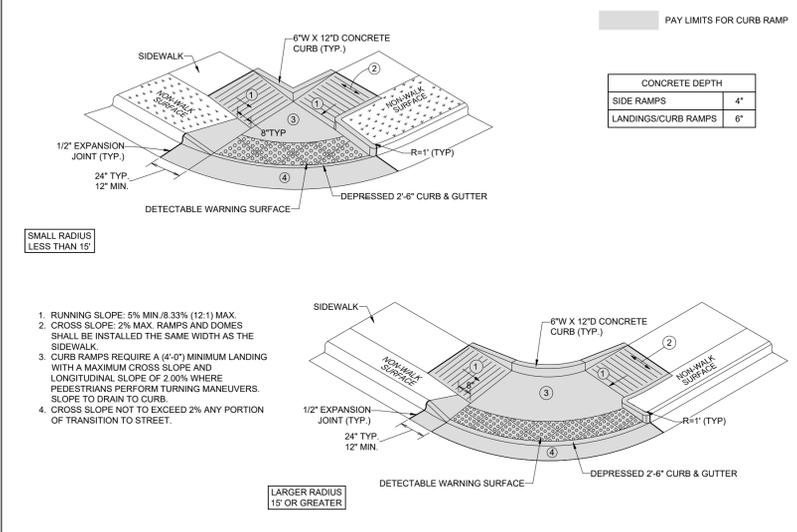
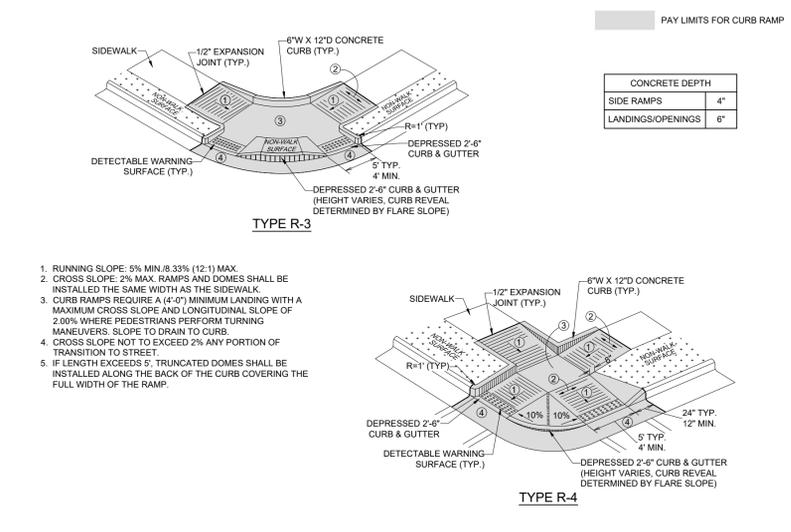
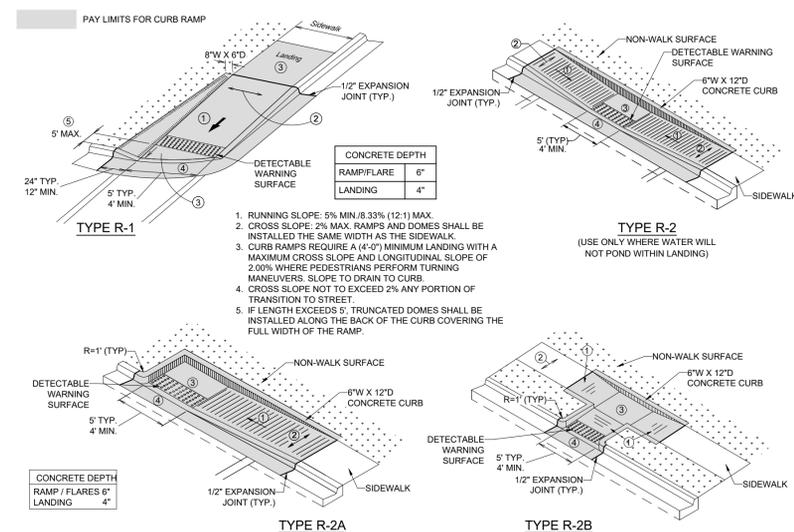
- NOTES:**
- RESIDENTIAL DRIVEWAYS TO BE 12' TO 24' WIDTH EXCEPT WHEN CONNECTING TO AN ALLEY WIDTH MAY BE INCREASED TO ALLOW AN ADDITIONAL 9' WIDE PARKING PAD IF DISTANCE FROM THE ALLEY TO THE STRUCTURE IS LESS THAN 16'.
  - COMMERCIAL & INDUSTRIAL DRIVEWAYS TO BE 18' TO 30' WIDTH.
  - ALLEY CONNECTIONS TO BE 16' WIDTH.
  - ALL CONCRETE SHALL BE 3000 PSI.
  - IF CURB CUT IS WITHIN 5' FROM A JOINT, THEN THE CUT SHALL BE MADE AT THAT JOINT.
  - ALL DRIVEWAYS SHALL BE INSTALLED WITH A SIDEWALK SECTION AND UTILITY STRIP AS SHOWN. SIDEWALK SECTIONS SHALL HAVE 1/4" PER FOOT FALL TOWARDS THE STREET.
  - LOCATE DRIVEWAYS A MINIMUM OF 3 FEET FROM SEWER SERVICE LINES.



- NOTES:**
- TRANSVERSE EXPANSION JOINTS SHALL BE SPACED 50' MAXIMUM.
  - CONTRACTION JOINTS SHALL BE SPACED 5' MAXIMUM.
  - ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.
  - ALL CONCRETE SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE ACI.
  - SIDEWALK EASEMENT REQUIRED WHEN SIDEWALK IS OUTSIDE PUBLIC RIGHT OF WAY.

TOWN OF APEX STANDARDS  
 EFFECTIVE: APRIL 9, 2024  
**DRIVEWAY APRON (CURB & GUTTER)**  
 STD. NO. 300.07  
 SHEET 1 OF 2

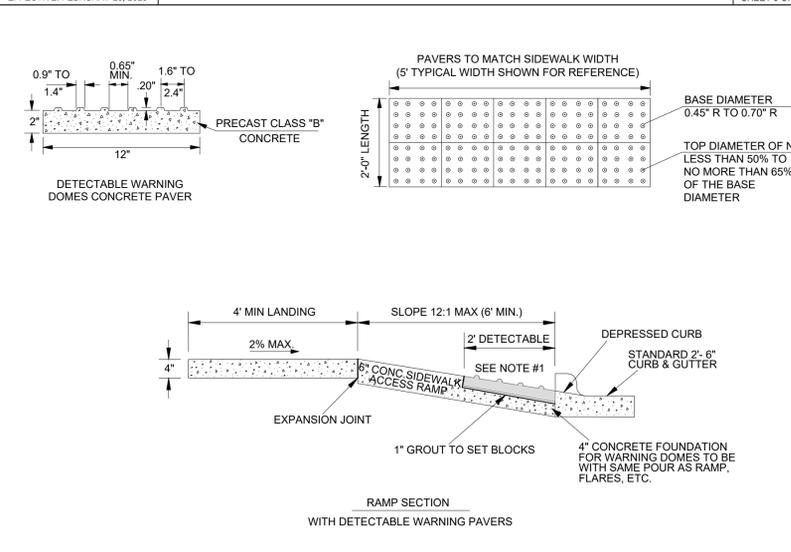
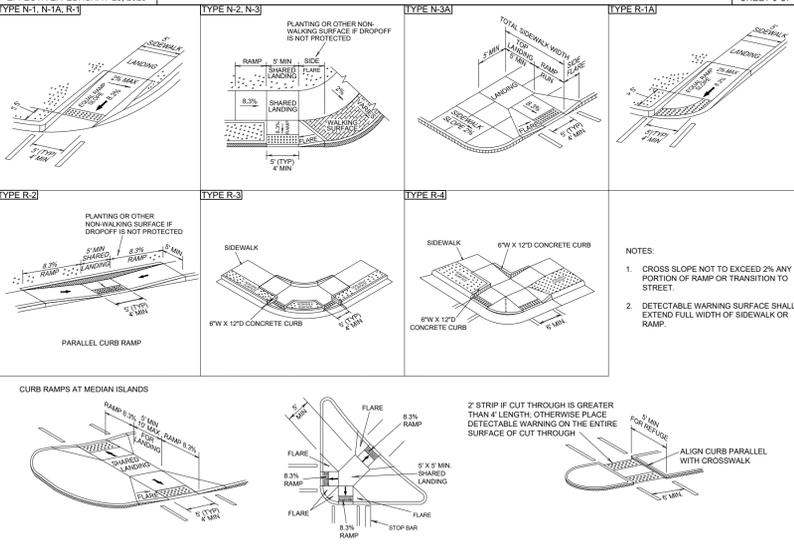
TOWN OF APEX STANDARDS  
 EFFECTIVE: JUNE 13, 2023  
**CONCRETE SIDEWALK**  
 STD. NO. 300.08  
 SHEET 1 OF 1



TOWN OF APEX STANDARDS  
 EFFECTIVE: FEBRUARY 28, 2023  
**CURB RAMP (RETROFIT)**  
 STD. NO. 300.09  
 SHEET 5 OF 14

TOWN OF APEX STANDARDS  
 EFFECTIVE: FEBRUARY 28, 2023  
**CURB RAMP (RETROFIT)**  
 STD. NO. 300.09  
 SHEET 6 OF 14

TOWN OF APEX STANDARDS  
 EFFECTIVE: FEBRUARY 28, 2023  
**CURB RAMP (RETROFIT, SHARED FLARE)**  
 STD. NO. 300.09  
 SHEET 7 OF 14



- STANDARD CURB RAMPS HAVE BEEN DEVELOPED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND PUBLIC RIGHT OF WAY ACCESS GUIDELINES (PROWAG).
- CURB RAMPS SHALL BE PROVIDED AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SIDEWALK ACCESS RAMPS SHALL BE LOCATED AS INDICATED IN THE DETAIL, HOWEVER, THE LOCATION MAY BE ADJUSTED WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT.
- THE WALKING SURFACE SHALL BE SLIP RESISTANT. THE COLOR FOR THE DETECTABLE WARNING AREA SHALL BE GRAY, CHARCOAL, OR BLACK FOR CONTRAST.
- RUNNING SLOPE OF RAMPS SHALL BE 5 PERCENT MINIMUM AND 8.3 PERCENT MAXIMUM BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET.
- IN NO CASE SHALL THE WIDTH OF THE SIDEWALK ACCESS RAMP BE LESS THAN 48". ALL RAMPS SHALL BE INSTALLED AT THE SAME WIDTH AS THE SIDEWALK.
- USE CLASS A (3,000 PSI) CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NONSKID SURFACE.
- A 1/2" EXPANSION JOINT INSTALLED FULL DEPTH WILL BE REQUIRED WHERE THE CONCRETE SIDEWALK ACCESS RAMP JOINS THE CURB AND ALSO WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
- CURB RAMPS SHOULD BE PLACED PARALLEL TO THE DIRECTION OF TRAVEL.

TOWN OF APEX STANDARDS  
 EFFECTIVE: FEBRUARY 28, 2023  
**CURB RAMP (DETECTABLE WARNING PLACEMENT)**  
 STD. NO. 300.09  
 SHEET 9 OF 14

TOWN OF APEX STANDARDS  
 EFFECTIVE: FEBRUARY 28, 2023  
**CURB RAMP (DETECTABLE WARNING - PAVERS)**  
 STD. NO. 300.09  
 SHEET 11 OF 14

TOWN OF APEX STANDARDS  
 EFFECTIVE: FEBRUARY 28, 2023  
**CURB RAMP (GENERAL NOTES)**  
 STD. NO. 300.09  
 SHEET 14 OF 14

### TYPICAL REGULATORY SIGNS

SIGN SIZES	APPROACH TYPE	
	SINGLE LANE	MULTI-LANE
R1-1 (STOP)	30" x 30"	36" x 36"
R1-2 (YIELD)	36" x 36" x 36"	48" x 48" x 48"
R5-1 (DO NOT ENTER)	30" x 30"	36" x 36"
R2-1 (SPEED LIMIT)	24" x 30"	30" x 36"

\* FOR OTHER TYPES OF REGULATORY SIGNS CONSULT THE MUTCD

### CROSSWALK SIGNS

SIGN SIZES	APPROACH TYPE	
	SINGLE LANE	MULTI-LANE
W11-2 (PEDESTRIAN)	30" x 30"	36" x 36"
S1-1 (SCHOOL)	36" x 36"	36" x 36"
W16-7P (ARROW PLAQUE)	21" x 15"	21" x 15"
R1-5 (YIELD HERE TO Peds)	36" x 36"	36" x 36"
R1-6/R1-6b (IN-STREET CROSSING)	12" x 36"	12" x 36"

NOTES:  
 1. SHEETING MATERIAL FOR ALL SIGNS SHALL BE HIGH INTENSITY PRISMATIC (HIP) TYPE IV MULTI-LAYER SHEETING.  
 2. ALL STREET NAME SIGNS INSTALLED IN RESIDENTIAL AREAS SHALL COMPLY WITH STANDARD DIMENSIONS. STREET NAME SIGNS SHALL BE GREEN WITH WHITE LEGEND AND BORDER. LETTERING SHALL BE COMPOSED OF UPPER AND LOWER-CASE LETTERS. LOWER-CASE LETTERS SHALL BE 75% THE HEIGHT OF UPPER-CASE LETTERS. STREET SUFFIXES SHALL BE UPPER-CASE LETTERS. FONT TYPE SHALL BE HIGHWAY GOTHIC SERIES C. 36-INCH BLADES SHALL BE STANDARD FOR STREET NAMES, WITH 15 CHARACTERS OR LESS.  
 3. STREET NAME SIGNS SHALL BE FABRICATED USING WHITE (HIP) SHEETING AS A BASE LAYER WITH GREEN (HIP) SHEETING OVERLAPPED. THE LEGEND SHALL BE DIGITALLY CUT OR PRINTED FROM THE OVERLAY LAYER.  
 4. PEDESTRIAN WARNING SIGNS AND SCHOOL CROSSING SIGNS SHALL HAVE A FLUORESCENT YELLOW-GREEN BACKGROUND WITH BLACK LEGEND AND BORDERS.  
 5. IF IN-STREET CROSSING SIGNS ARE USED IN SCHOOL AREAS, R1-6b SIGN SHALL BE USED INSTEAD OF R1-6 SIGN.  
 6. REFER TO MUTCD FOR ALL OTHER GUIDANCE.

### POST-MOUNTED STREET NAME SIGN (D3-1)

SIGN TYPE	SIGN DIMENSIONS					
	A	B	C	D	E	F
STANDARD	9"	6"	1.5"	4"	0.75"	0.5"
MULTI-LANE (> 40 MPH)	12"	8"	2"	6"	0.75"	0.5"

NOTES:  
 1. SHEETING MATERIAL FOR ALL SIGNS SHALL BE HIGH INTENSITY PRISMATIC (HIP) TYPE IV MULTI-LAYER SHEETING.  
 2. ALL STREET NAME SIGNS INSTALLED IN RESIDENTIAL AREAS SHALL COMPLY WITH STANDARD DIMENSIONS. STREET NAME SIGNS SHALL BE GREEN WITH WHITE LEGEND AND BORDER. LETTERING SHALL BE COMPOSED OF UPPER AND LOWER-CASE LETTERS. LOWER-CASE LETTERS SHALL BE 75% THE HEIGHT OF UPPER-CASE LETTERS. STREET SUFFIXES SHALL BE UPPER-CASE LETTERS. FONT TYPE SHALL BE HIGHWAY GOTHIC SERIES C. 36-INCH BLADES SHALL BE STANDARD FOR STREET NAMES, WITH 15 CHARACTERS OR LESS.  
 3. STREET NAME SIGNS SHALL BE FABRICATED USING WHITE (HIP) SHEETING AS A BASE LAYER WITH GREEN (HIP) SHEETING OVERLAPPED. THE LEGEND SHALL BE DIGITALLY CUT OR PRINTED FROM THE OVERLAY LAYER.  
 4. PEDESTRIAN WARNING SIGNS AND SCHOOL CROSSING SIGNS SHALL HAVE A FLUORESCENT YELLOW-GREEN BACKGROUND WITH BLACK LEGEND AND BORDERS.  
 5. IF IN-STREET CROSSING SIGNS ARE USED IN SCHOOL AREAS, R1-6b SIGN SHALL BE USED INSTEAD OF R1-6 SIGN.  
 6. REFER TO MUTCD FOR ALL OTHER GUIDANCE.

### BREAKAWAY SIGN PLACEMENT

### POST INSTALLATION

### ANCHOR INSTALLATION

NOTES:  
 1. ON ALL ROADWAYS EXCEPT STREETS WITH STANDARD CURB AND GUTTER AND SPEED LIMITS EQUAL TO OR LESS THAN 25 MPH, ALL SIGNS WITHIN CLEAR ZONE SHALL BE OF A BREAKAWAY DESIGN THAT COMPLIES WITH THE LATEST EDITION OF AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) AND NCHRP REPORT 350.  
 2. DRIVE ANCHOR MINIMUM 26 INCHES INTO THE GROUND. LEAVE 2 INCHES MINIMUM TO 4 INCHES MAXIMUM TO PROTRUDE ABOVE SURFACE.  
 3. FIT POST INTO ANCHOR. FASTEN CORNER BOLT THROUGH THE FOURTH HOLE ON THE POST AND THE FIRST HOLE ON THE ANCHOR.  
 4. IN AREAS OF WEAK SOILS THE ANCHOR UNIT MAY BE BACKFILLED WITH CONCRETE, IF DETERMINED BY THE INSPECTOR.

### PROTECTION AREA DO NOT ENTER

NOTES:  
 1. "PROTECTION AREA DO NOT ENTER" SIGNS TO BE MADE OF DURABLE WATERPROOF MATERIAL.  
 2. ALL LETTERS TO BE AT LEAST 3 INCHES HIGH, CLEARLY LEGIBLE AND SPACED AS INDICATED ABOVE.  
 3. SIGNS TO BE PLACED 20 FEET ON CENTER, MAX.  
 4. SIGNS TO BE PLACED AT EACH END OF LINEAR TREE PROTECTION AREA.  
 5. ALL FENCE SHOULD BE SECURELY ATTACHED TO SIGNS AND FABRIC.  
 6. FABRIC MUST BE ATTACHED TO POSTS ONLY. DO NOT ATTACH TO TREES.  
 7. MAINTAIN PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.

### TOWN OF APEX STANDARDS

EFFECTIVE: SEPTEMBER 24, 2024

### STREET SIGNS GENERAL

SHEET 1 OF 4

OCTAGON		DIAMOND		VERTICAL RECTANGLE	
A	B	C	D	E	F
30"	3"	24"	-	18"	24"
36"	3"	30"	16"	18"	24"

### TOWN OF APEX STANDARDS

EFFECTIVE: APRIL 9, 2024

### STREET SIGNS BREAKAWAY SIGN INSTALLATION

SHEET 2 OF 4

NOTES:  
 1. MINIMUM LATERAL OFFSET FROM EDGE OF TRAVELED WAY SHOULD BE 12 FEET.  
 2. ON CURB SECTIONS PROVIDE A MINIMUM VERTICAL CLEARANCE OF 7 FEET FROM EDGE OF TRAVELED WAY. WHERE SIDEWALKS ARE PRESENT PROVIDE A MINIMUM VERTICAL CLEARANCE OF 7 FEET FROM EDGE OF TRAVELED WAY OR TOP OF SIDEWALK, WHICHEVER IS HIGHER.  
 3. WHERE CROSSWALKS EXIST, SIGNS SHOULD BE PLACED WITHIN 4 FEET IN ADVANCE OF THE CROSSWALK. STREET NAME SIGNS MAY BE PLACED ABOVE A REGULATORY STOP OR YIELD SIGN WITH NO REQUIRED VERTICAL SEPARATION.  
 4. ALL NEW SIGNS SHALL BE POSTED ON 14 GAUGE, 2" PERFORATED SQUARE SIGN POSTS. ALL STREET NAME SIGNS RETROFITTED TO EXISTING U-CHANNEL SHALL BE POSTED ON 1.5" SQUARE SIGN POSTS. SIGN RETROFITTING SHALL BE FOR TOWN USE ONLY.  
 5. ON ALL ROADWAYS EXCEPT STREETS WITH STANDARD CURB AND GUTTER AND SPEED LIMITS EQUAL TO OR LESS THAN 25 MPH, ALL SIGNS WITHIN CLEAR ZONE SHALL BE OF A BREAKAWAY DESIGN THAT COMPLIES WITH THE LATEST EDITION OF AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) AND NCHRP REPORT 350.  
 6. IN AREAS OF WEAK SOILS A BREAKAWAY ANCHOR UNIT SHALL BE USED AND BACKFILLED WITH CONCRETE, IF DETERMINED BY THE INSPECTOR.

### TOWN OF APEX STANDARDS

EFFECTIVE: JUNE 11, 2024

### STREET SIGNS PLACEMENT & INSTALLATION

SHEET 2 OF 4

NOTES:  
 1. REMOVE SEDIMENT WHEN AT HALF HEIGHT OF SILT FENCE.  
 2. REPAIR OR REPLACE FENCE IMMEDIATELY WHEN TEARS, HOLES, SAGGING, COLLAPSE, OR OTHER DEFICIENCIES FOUND.  
 3. THE DESIGN LIFE OF A SYNTHETIC SILT FENCE IS APPROX. 6 MONTHS. DETERIORATED SILT FENCE MUST BE REPLACED.  
 4. SILT FENCE SHALL BE INSPECTED WEEKLY OR AFTER 1 INCH RAIN EVENT.  
 5. USE #57 WASHED STONE FOR REPAIR OF SILT FENCE FAILURES, AND FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

### TOWN OF APEX STANDARDS

EFFECTIVE: JUNE 11, 2024

### TEMPORARY SILT FENCE (SUPER SILT FENCE)

SHEET 2 OF 2

GENERAL NOTES:  
 1. APPLICABLE FOR DRAINAGE AREAS NO MORE THAN 1/4 ACRE.  
 2. USE AS A REPAIR OF SILT FENCE FAILURES.  
 3. BURY WIRE FENCE, HARDWARE CLOTH, AND SILT FENCE FABRIC 6 INCHES.

MAINTENANCE NOTES:  
 1. REMOVE SEDIMENT WHEN AT HALF HEIGHT OF STONE. REFRESH STONE THAT BECOMES CLOGGED WITH SEDIMENT/DEBRIS.  
 2. REPAIR OR REPLACE FENCE & HARDWARE CLOTH IMMEDIATELY WHEN DEFICIENCIES FOUND.

### TOWN OF APEX STANDARDS

EFFECTIVE: NOVEMBER 19, 2019

### STREET SIGNS 3/8" BOLT HOLES

SHEET 3 OF 4

NOTES:  
 (1) STAGGER JOINTS ON ALL LINEAR MEMBERS  
 (2) USE GRAVEL FILL TO LEVEL THE BASE MEMBERS WHERE NEEDED  
 (3) USE GALVANIZED SCREW FASTERS  
 (4) USE TECO PLATES AT JOINTS AND FOR FASTENING EDGING  
 (5) PRE DRILL HOLES FOR ANCHORING DECK BOARDS

### TOWN OF APEX STANDARDS

EFFECTIVE: APRIL 9, 2024

### STREET SIGNS GENERAL

SHEET 3 OF 4

NOTES:  
 1. SHEETING MATERIAL FOR ALL SIGNS SHALL BE HIGH INTENSITY PRISMATIC (HIP) TYPE IV MULTI-LAYER SHEETING.  
 2. ALL STREET NAME SIGNS INSTALLED IN RESIDENTIAL AREAS SHALL COMPLY WITH STANDARD DIMENSIONS. STREET NAME SIGNS SHALL BE GREEN WITH WHITE LEGEND AND BORDER. LETTERING SHALL BE COMPOSED OF UPPER AND LOWER-CASE LETTERS. LOWER-CASE LETTERS SHALL BE 75% THE HEIGHT OF UPPER-CASE LETTERS. STREET SUFFIXES SHALL BE UPPER-CASE LETTERS. FONT TYPE SHALL BE HIGHWAY GOTHIC SERIES C. 36-INCH BLADES SHALL BE STANDARD FOR STREET NAMES, WITH 15 CHARACTERS OR LESS.  
 3. STREET NAME SIGNS SHALL BE FABRICATED USING WHITE (HIP) SHEETING AS A BASE LAYER WITH GREEN (HIP) SHEETING OVERLAPPED. THE LEGEND SHALL BE DIGITALLY CUT OR PRINTED FROM THE OVERLAY LAYER.  
 4. PEDESTRIAN WARNING SIGNS AND SCHOOL CROSSING SIGNS SHALL HAVE A FLUORESCENT YELLOW-GREEN BACKGROUND WITH BLACK LEGEND AND BORDERS.  
 5. IF IN-STREET CROSSING SIGNS ARE USED IN SCHOOL AREAS, R1-6b SIGN SHALL BE USED INSTEAD OF R1-6 SIGN.  
 6. REFER TO MUTCD FOR ALL OTHER GUIDANCE.

### TOWN OF APEX STANDARDS

EFFECTIVE: JUNE 11, 2024

### TEMPORARY SILT FENCE

SHEET 1 OF 2

GENERAL NOTES:  
 1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE PER 100 LF OF FENCE AND NEVER IN AREAS OF CONCENTRATED FLOW.  
 2. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.  
 3. WRAP THE SILT FENCE AROUND ALL EXISTING FIRE HYDRANTS SO THEY ARE FULLY VISIBLE FROM THE ROADWAY.  
 4. SILT FENCE SHOULD BE A MINIMUM OF 5 FEET FROM THE TOE OF SLOPE.  
 5. OVERLAP 12 INCHES WHEN SPLICING FABRIC.  
 6. ANCHORING OF TOE OF FENCE SHOULD BE REINFORCED WITH 12 INCHES OF NCDOT #5 OR #57 WASHED STONE WHEN FLOW WILL RUN PARALLEL TO TOE OF FENCE.

MAINTENANCE NOTES:  
 1. REMOVE SEDIMENT WHEN AT HALF HEIGHT OF SILT FENCE.  
 2. REPAIR OR REPLACE FENCE IMMEDIATELY WHEN TEARS, HOLES, SAGGING, COLLAPSE, OR OTHER DEFICIENCIES FOUND.  
 3. THE DESIGN LIFE OF A SYNTHETIC SILT FENCE IS APPROX. 6 MONTHS. DETERIORATED SILT FENCE MUST BE REPLACED.  
 4. SILT FENCE SHALL BE INSPECTED WEEKLY OR AFTER 1 INCH RAIN EVENT.  
 5. USE #57 WASHED STONE FOR REPAIR OF SILT FENCE FAILURES, AND FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

### TOWN OF APEX STANDARDS

EFFECTIVE: JUNE 11, 2024

### TEMPORARY SILT FENCE OUTLET

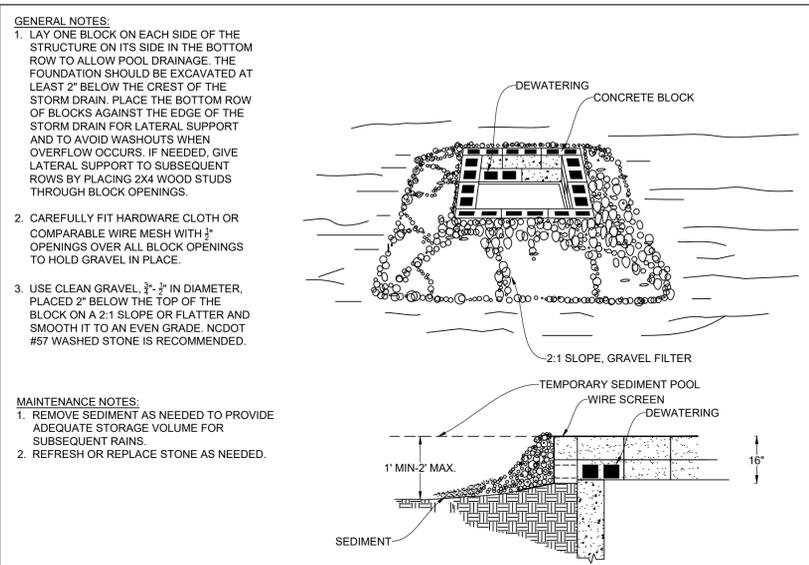
SHEET 1 OF 1

GENERAL NOTES:  
 1. APPLICABLE FOR DRAINAGE AREAS NO MORE THAN 1/4 ACRE.  
 2. USE AS A REPAIR OF SILT FENCE FAILURES.  
 3. BURY WIRE FENCE, HARDWARE CLOTH, AND SILT FENCE FABRIC 6 INCHES.

MAINTENANCE NOTES:  
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 2. REPAIR OR REPLACE FENCE & HARDWARE CLOTH IMMEDIATELY WHEN DEFICIENCIES FOUND.

PROJECT REFERENCE NO. SHEET NO. 2C

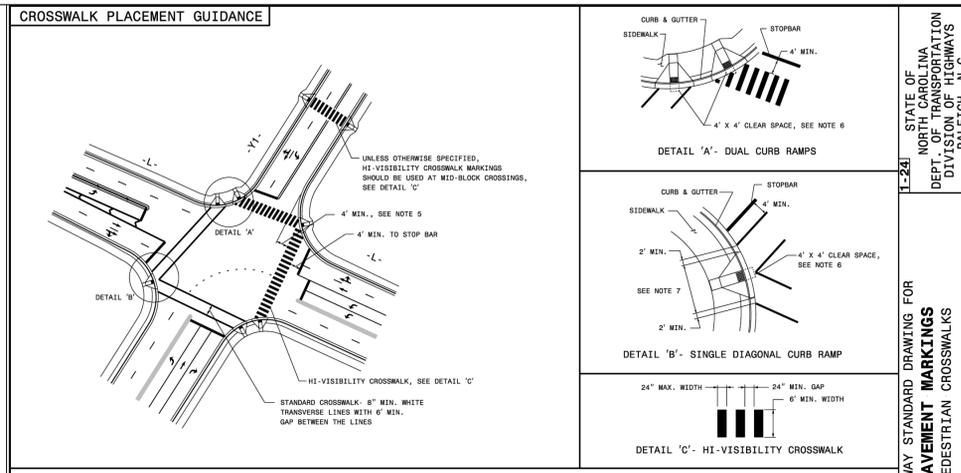
**TOWN OF APEX**  
 TRANSPORTATION & INFRASTRUCTURE DEVELOPMENT  
 105-B UPCHURCH ST  
 APEX, NC 27502  
 919-249-3417



TOWN OF APEX STANDARDS  
EFFECTIVE: JUNE 11, 2024

**BLOCK & GRAVEL DROP INLET PROTECTION**

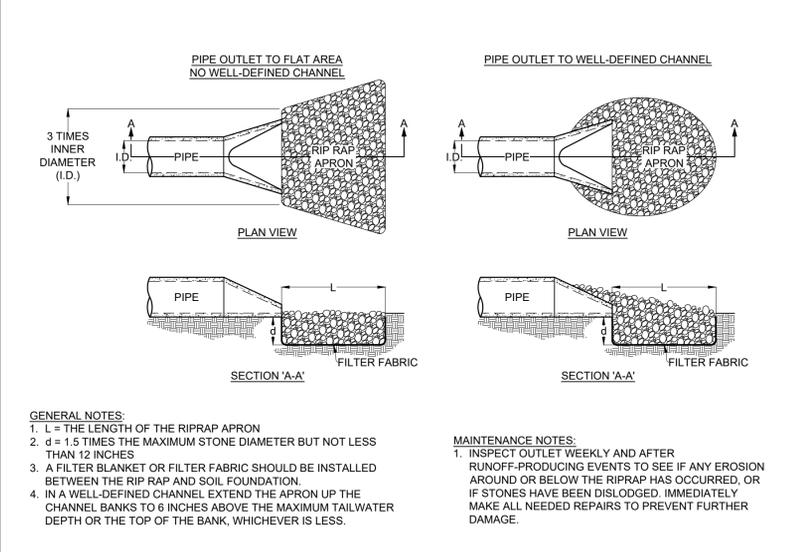
STD. NO. 400.08  
SHEET 1 OF 1



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PAVEMENT MARKINGS PEDESTRIAN CROSSWALKS

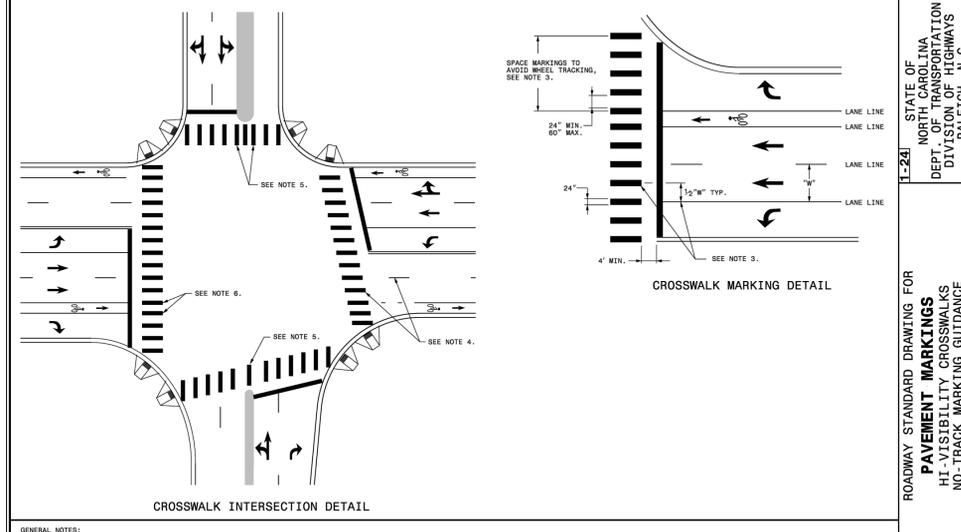
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TOWN OF APEX STANDARDS  
EFFECTIVE: JUNE 11, 2024

**PIPE OUTLET**

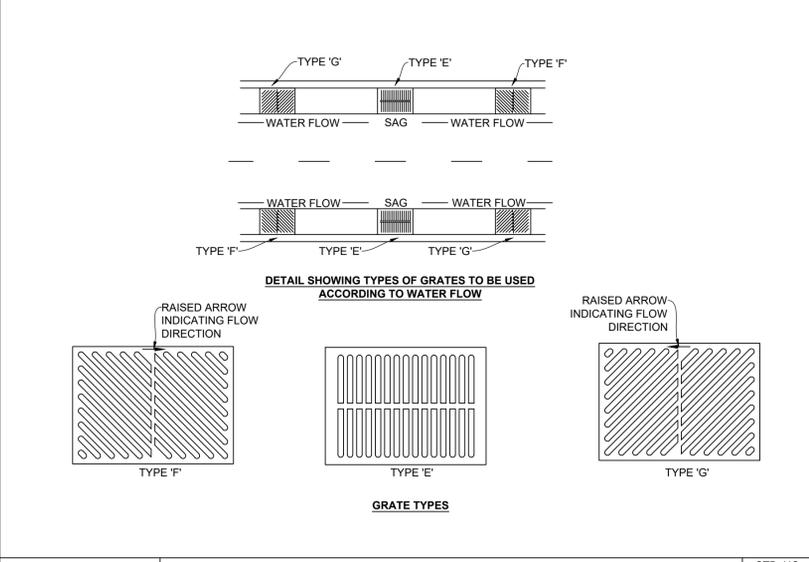
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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PAVEMENT MARKINGS HI-VISIBILITY CROSSWALKS NO-TRACK MARKING GUIDANCE

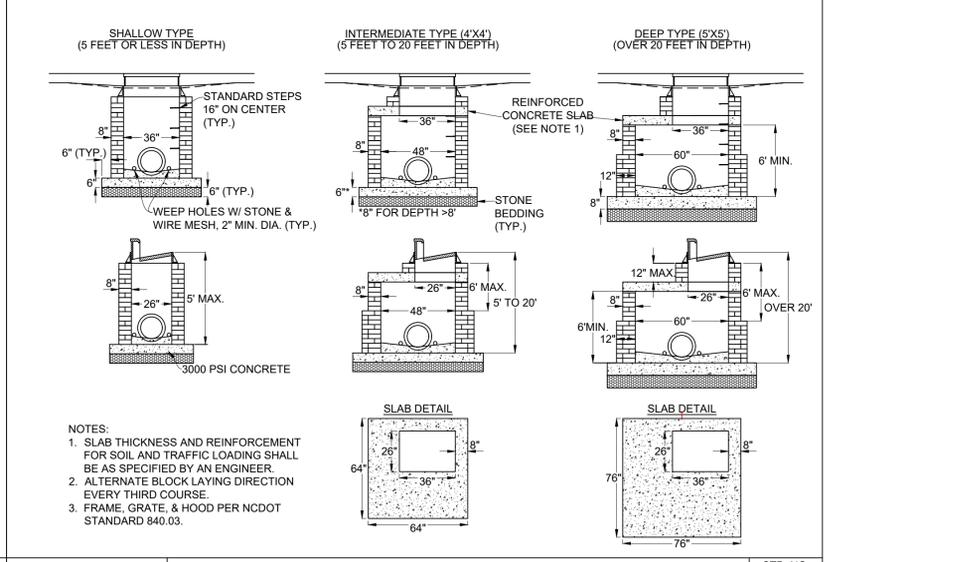
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TOWN OF APEX STANDARDS  
EFFECTIVE: DECEMBER 3, 2002

**GRATE PLACEMENT DETAIL FOR CATCH BASIN**

STD. NO. 500.03  
SHEET 1 OF 1



TOWN OF APEX STANDARDS  
EFFECTIVE: DECEMBER 18, 2012

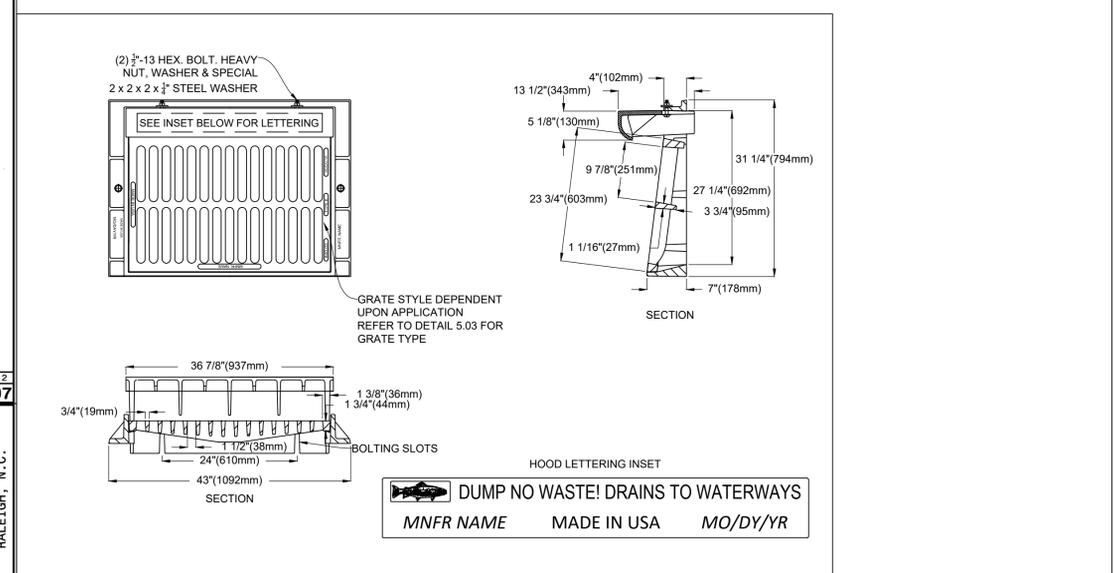
**BLOCK CATCH BASIN DETAIL**

STD. NO. 500.04  
SHEET 1 OF 1

**TOWN OF APEX**  
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919-249-3417

PROJECT REFERENCE NO. SHEET NO.  
2D

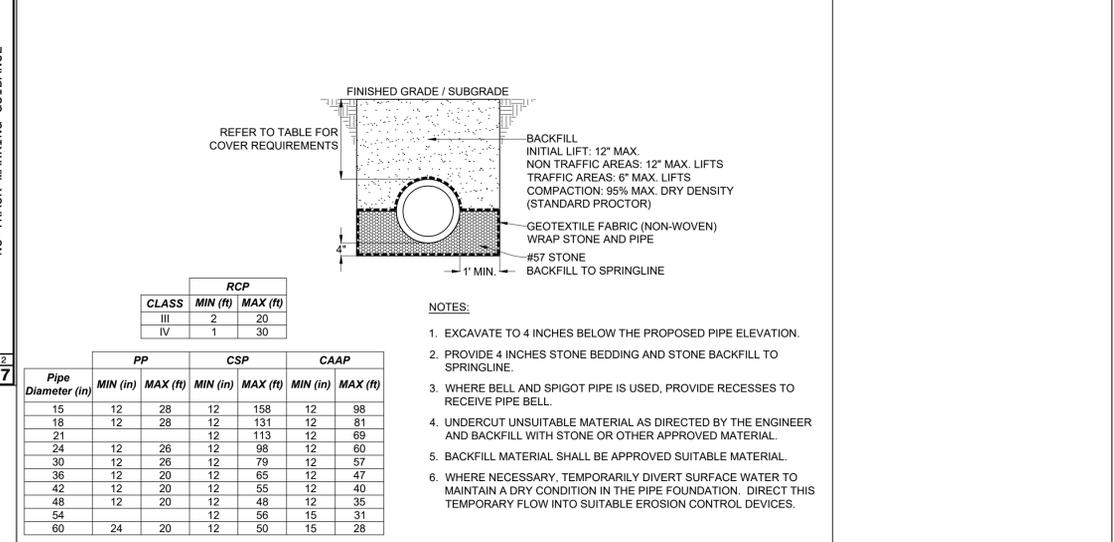
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TOWN OF APEX STANDARDS  
EFFECTIVE: DECEMBER 3, 2002

**FRAME DETAIL FOR CATCH BASIN**

STD. NO. 500.08  
SHEET 1 OF 1



TOWN OF APEX STANDARDS  
EFFECTIVE: JUNE 11, 2024

**STORM DRAIN PIPE BEDDING & BACKFILLING**

STD. NO. 500.09  
SHEET 1 OF 1

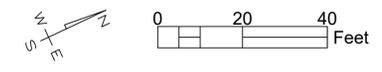
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105-B UPCHURCH ST  
APEX, NC 27502  
919-249-3417



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**FOR**  
**CONSTRUCTION**

ALL TREES IMPACTED BUT NOT IDENTIFIED TO BE CLEARED: ROOTS SHALL BE EXPOSED WITH AIR SPADE AND PRUNED BY CERTIFIED ARBORIST.

HYDRANT RELOCATIONS: FOR INSTALLATIONS WHERE HYDRANTS WILL BE RELOCATED, ALL HYDRANTS WITH GREATER THAN 20-YEARS OF OPERATIONAL SERVICE, AS INDICATED BY THE DATE OF MANUFACTURE PROVIDED ON THE HYDRANT, SHALL BE REPLACED WITH NEW FIRE HYDRANTS. THE EXISTING FIRE HYDRANT SHALL BE RETURNED TO THE TOWN OF APEX WATER RESOURCES DEPARTMENT. FOR INSTALLATIONS WHERE THE HYDRANT TO BE RELOCATED HAS LESS THAN 20-YEARS OF OPERATIONAL SERVICE, THE EXISTING HYDRANT MAY BE RELOCATED AT THE DISCRETION OF THE WATER RESOURCES DEPARTMENT. THE EXISTING HYDRANT SHALL STILL BE DISINFECTED, FLUSHED AND PRESSURE TESTED. ALL FIRE HYDRANTS SHALL BE INITIALLY TAGGED AND/OR BAGGED "NOT IN SERVICE". THIS TAG OR BAG SHALL NOT BE REMOVED UNTIL APPROVED BY THE INSPECTOR.



TOPOGRAPHIC INFORMATION SHOWN HEREON PROVIDED BY JACOB BERRY, PLS L-5294, DATED 10/11/2023

THODIST CHURCH INC  
2403470  
67910  
00295  
HUGHES ST  
C 27502-1910

IGUERITE CHERYL BENNETT  
426  
5  
1  
195  
002-0195

WALTERS, JEFFREY FRANKLIN WALTERS, CAROLYN PECORA  
0742406790  
018776  
02422  
215 E CHATHAM ST  
APEX NC 27502-1715

QUEST TRUST COMPANY  
0742407644  
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17171 PARK ROW STE 101  
HOUSTON TX 77084-4927

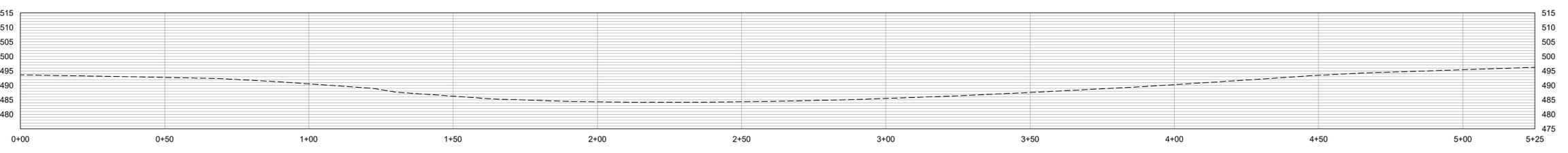
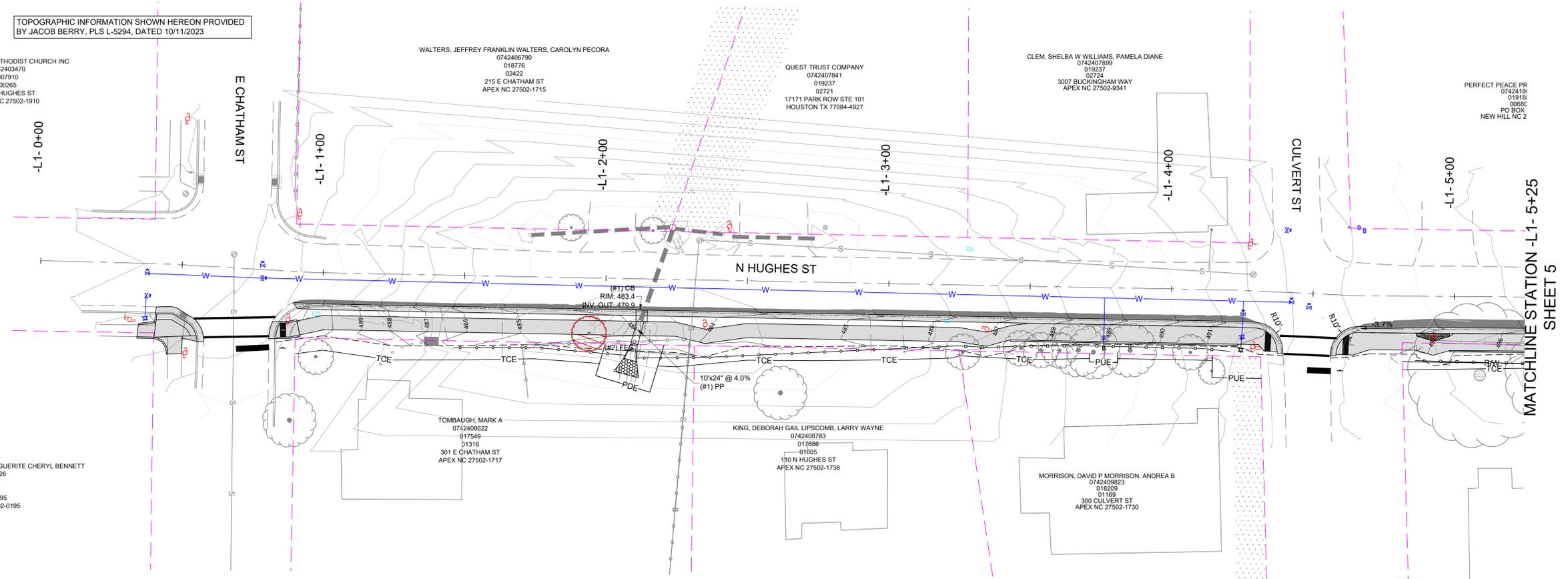
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3007 BUCKINGHAM WAY  
APEX NC 27502-9341

PERFECT PEACE PR  
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01918  
0068C  
PO BOX  
NEW HILL NC 2

TOMBAUGH, MARK A  
0742408622  
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301 E CHATHAM ST  
APEX NC 27502-1717

KING, DEBORAH GAIL LIPSCOMB, LARRY WAYNE  
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01905  
110 N HUGHES ST  
APEX NC 27502-1738

MORRISON, DAVID P MORRISON, ANDREA B  
0742408623  
019209  
01169  
300 CULVERT ST  
APEX NC 27502-1730



- LEGEND**
- ELECTRIC UTILITY
  - TELECOM UTILITY
  - S — SAN. SEWER
  - W — WATER DISTRIBUTION
  - G — GAS UTILITY
  - - - PROPERTY/ROW
  - NEW R/W
  - TEMP. CONSTR. EASEMENT
  - PERM. UTILITY EASEMENT
  - UTILITY POLE
  - PROPERTY CORNER
  - ⊗ FIRE HYDRANT
  - ⊙ SEWER MANHOLE
  - ⊗ WATER VALVE
  - SILT FENCE
  - TREE PROTECTION FENCE

MATCHLINE STATION -L1- 5+25  
SHEET 5

ALL TREES IMPACTED BUT NOT IDENTIFIED TO BE CLEARED: ROOTS SHALL BE EXPOSED WITH AIR SPADE AND PRUNED BY CERTIFIED ARBORIST.

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OPERTIES LLC  
350  
334  
7662-0334

DERRENBACHER, MONICA S DERRENBACHER, RICHARD F JR  
0742419137  
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212 CENTER ST  
APEX NC 27502-1702

HOWARD, JOSEPH M  
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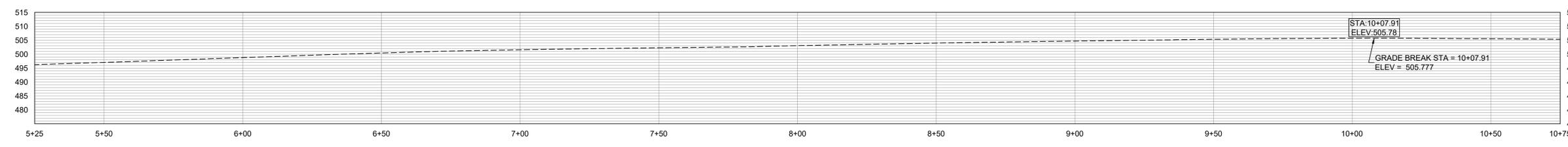
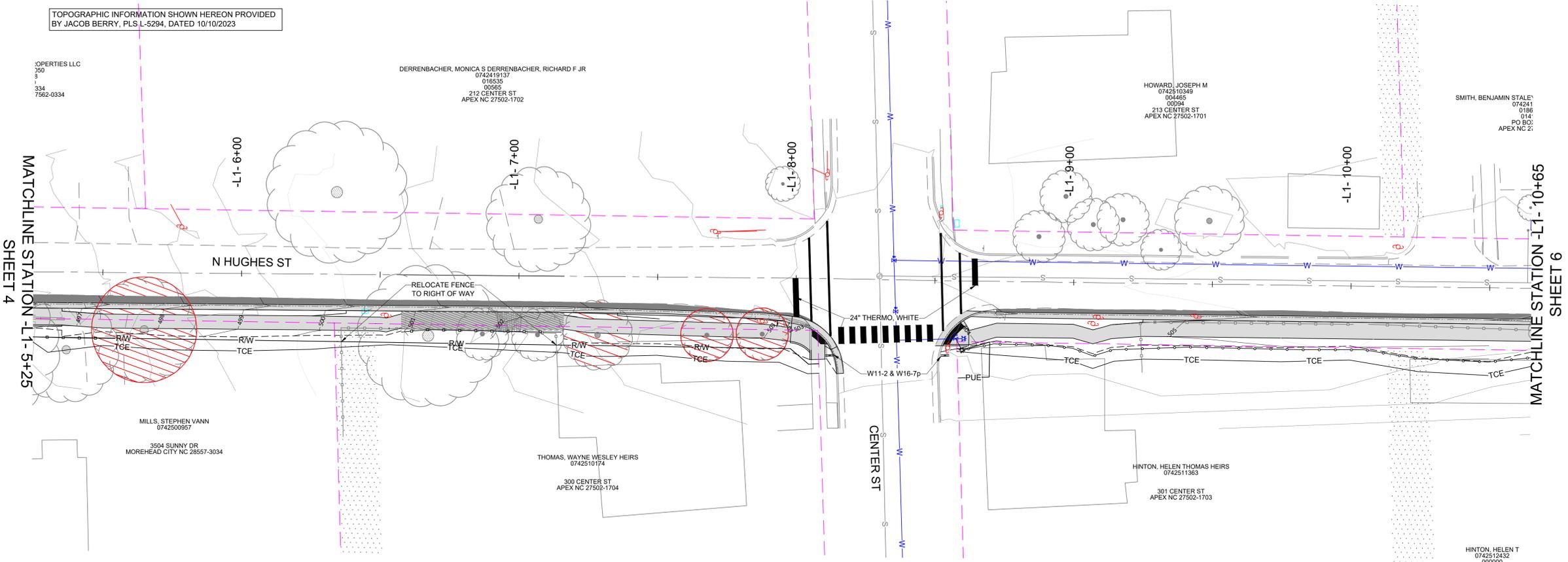
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MILLS, STEPHEN VANN  
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MOREHEAD CITY NC 28557-3034

THOMAS, WAYNE WESLEY HEIRS  
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300 CENTER ST  
APEX NC 27502-1704

HINTON, HELEN THOMAS HEIRS  
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301 CENTER ST  
APEX NC 27502-1703

HINTON, HELEN T  
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PROJECT REFERENCE NO.	SHEET NO.
	5




**TOWN OF APEX**  
TRANSPORTATION & INFRASTRUCTURE DEVELOPMENT  
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919-249-3417

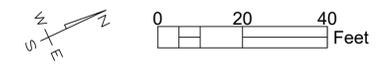
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  - WATER DISTRIBUTION
  - GAS UTILITY
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  - NEW R/W
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  - ⊕ WATER VALVE
  - SILT FENCE
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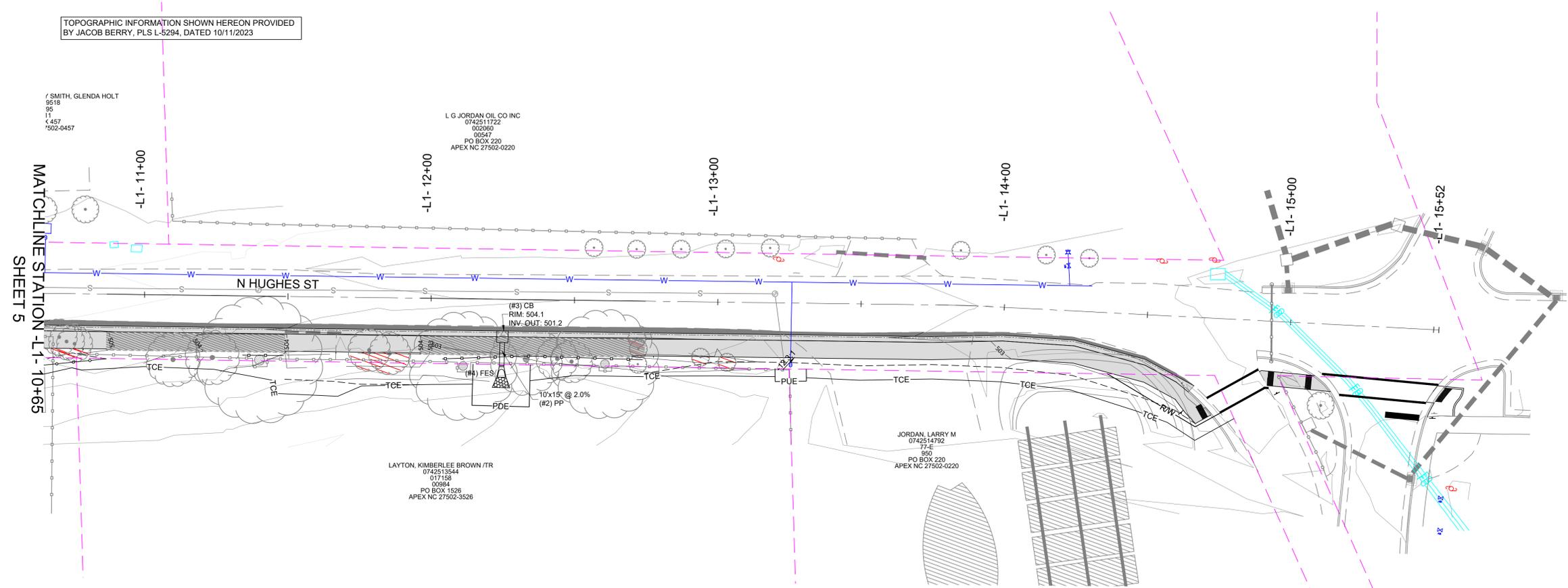


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**FOR**  
**CONSTRUCTION**

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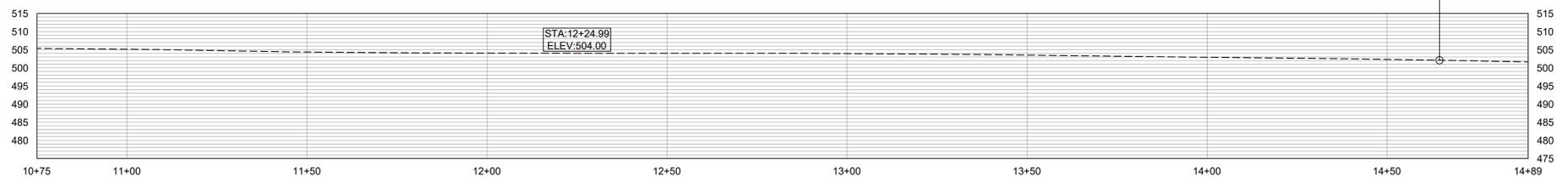


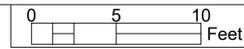
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**LEGEND**

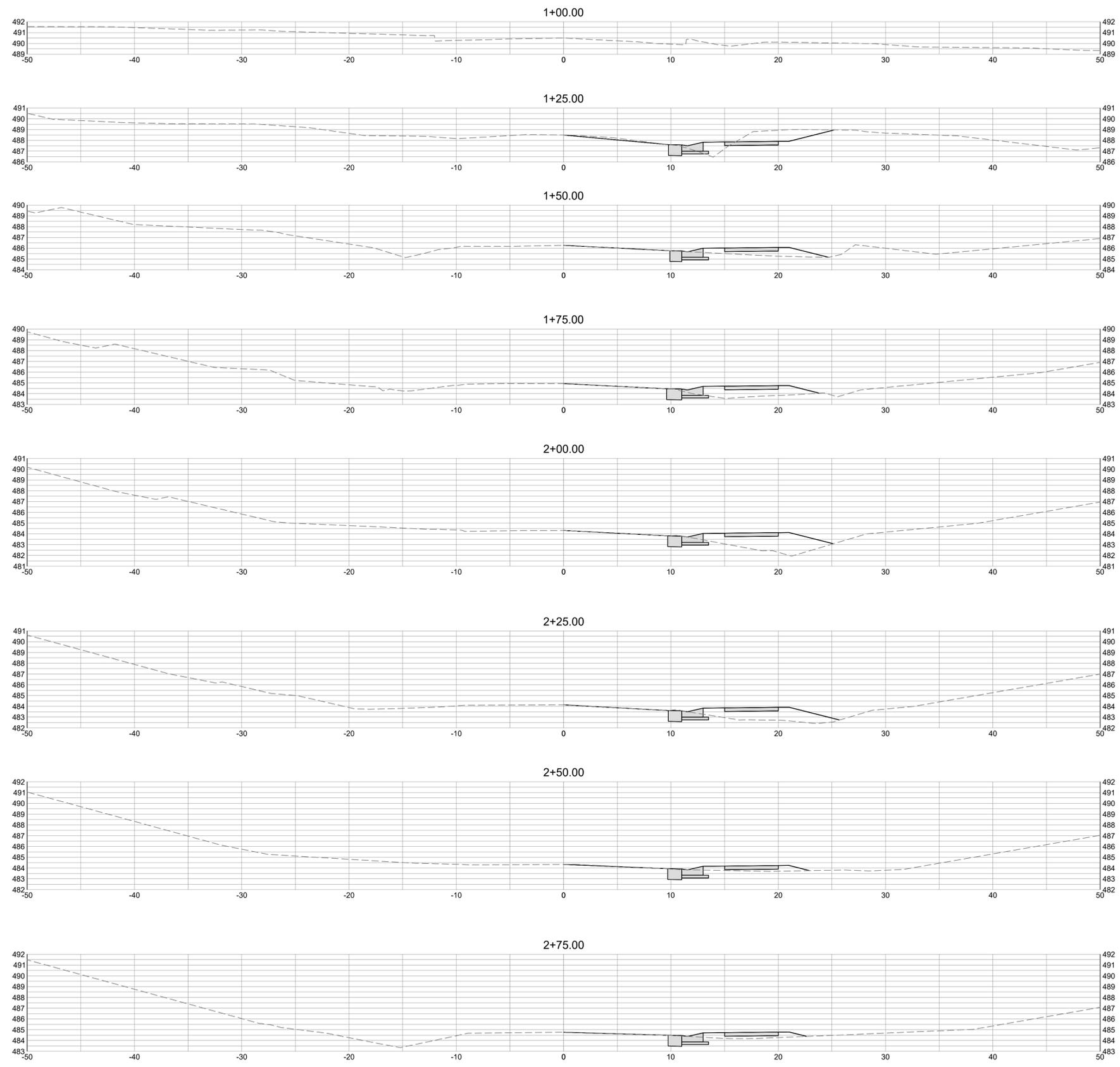
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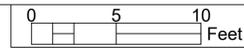




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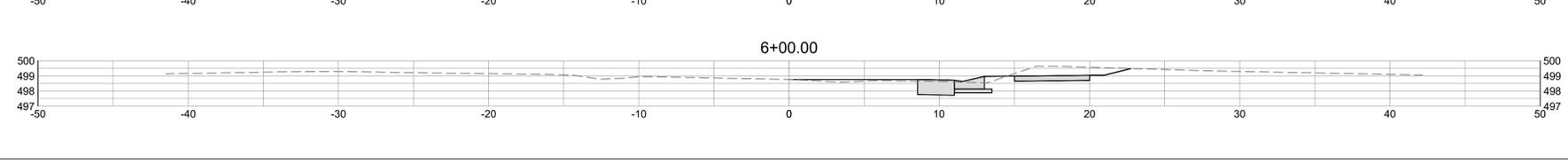
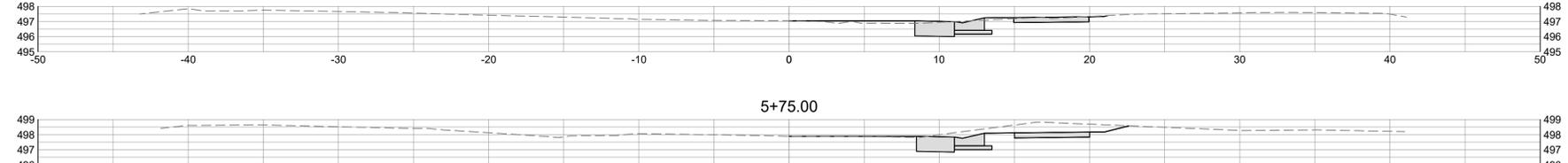
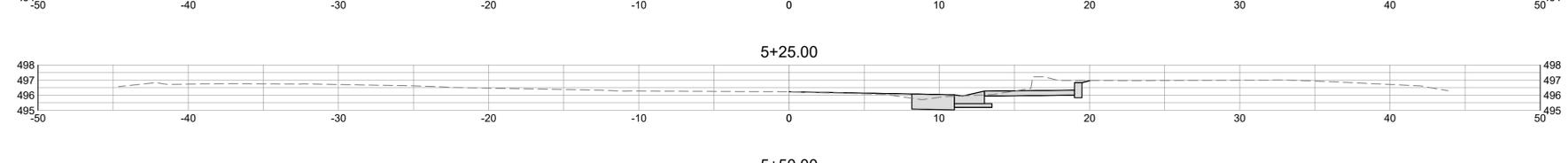
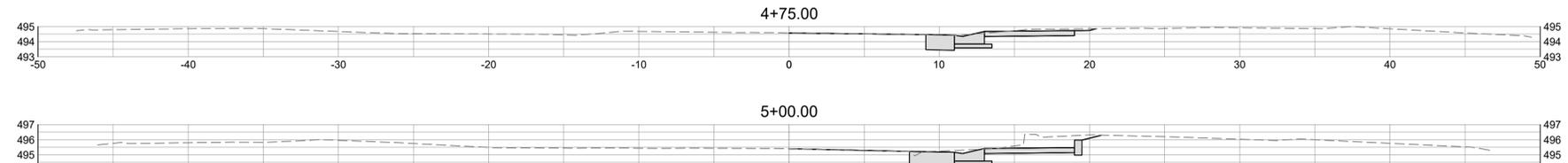
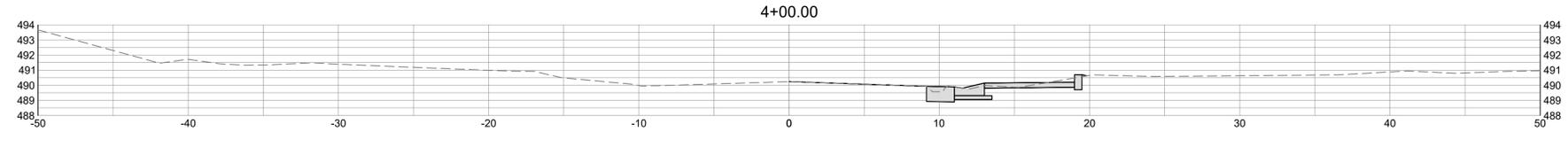
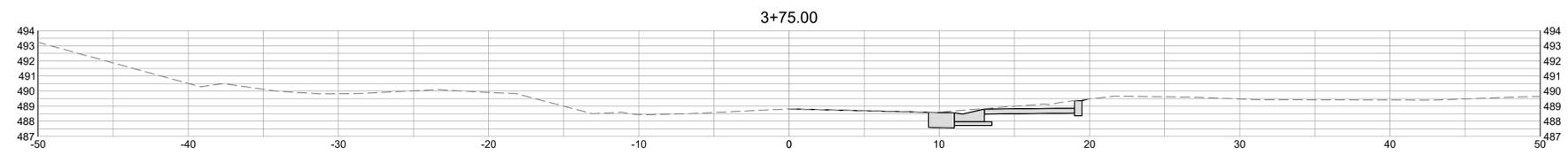
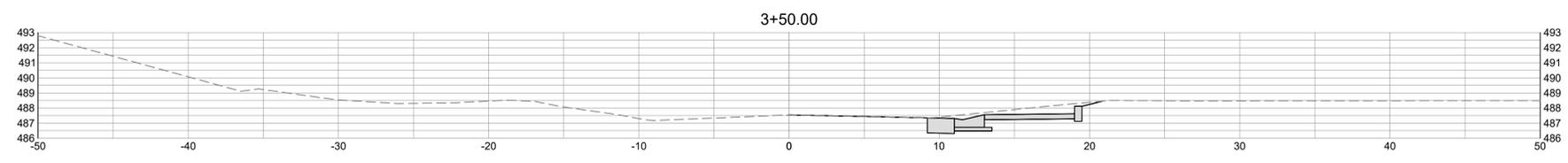
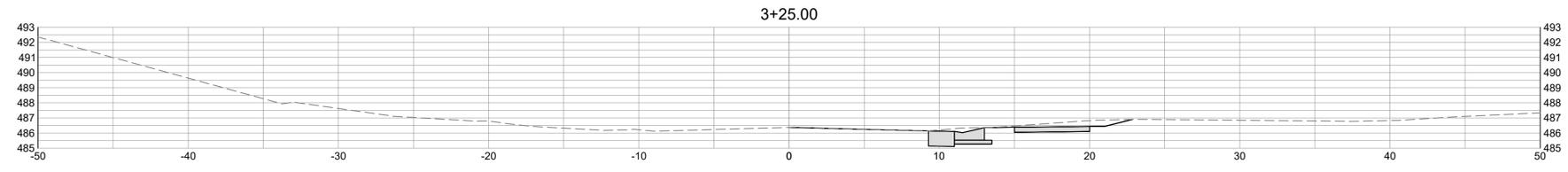
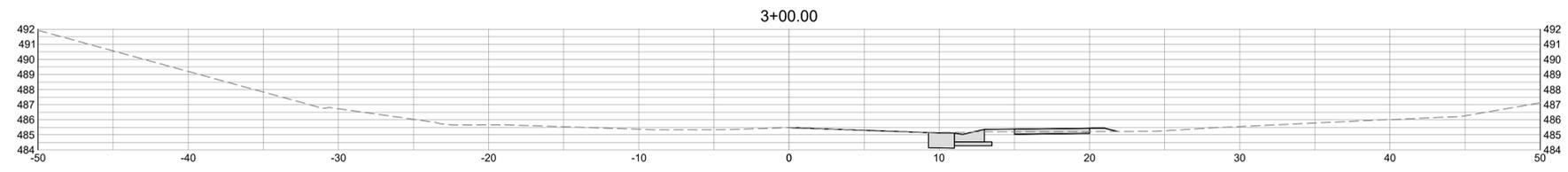
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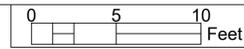




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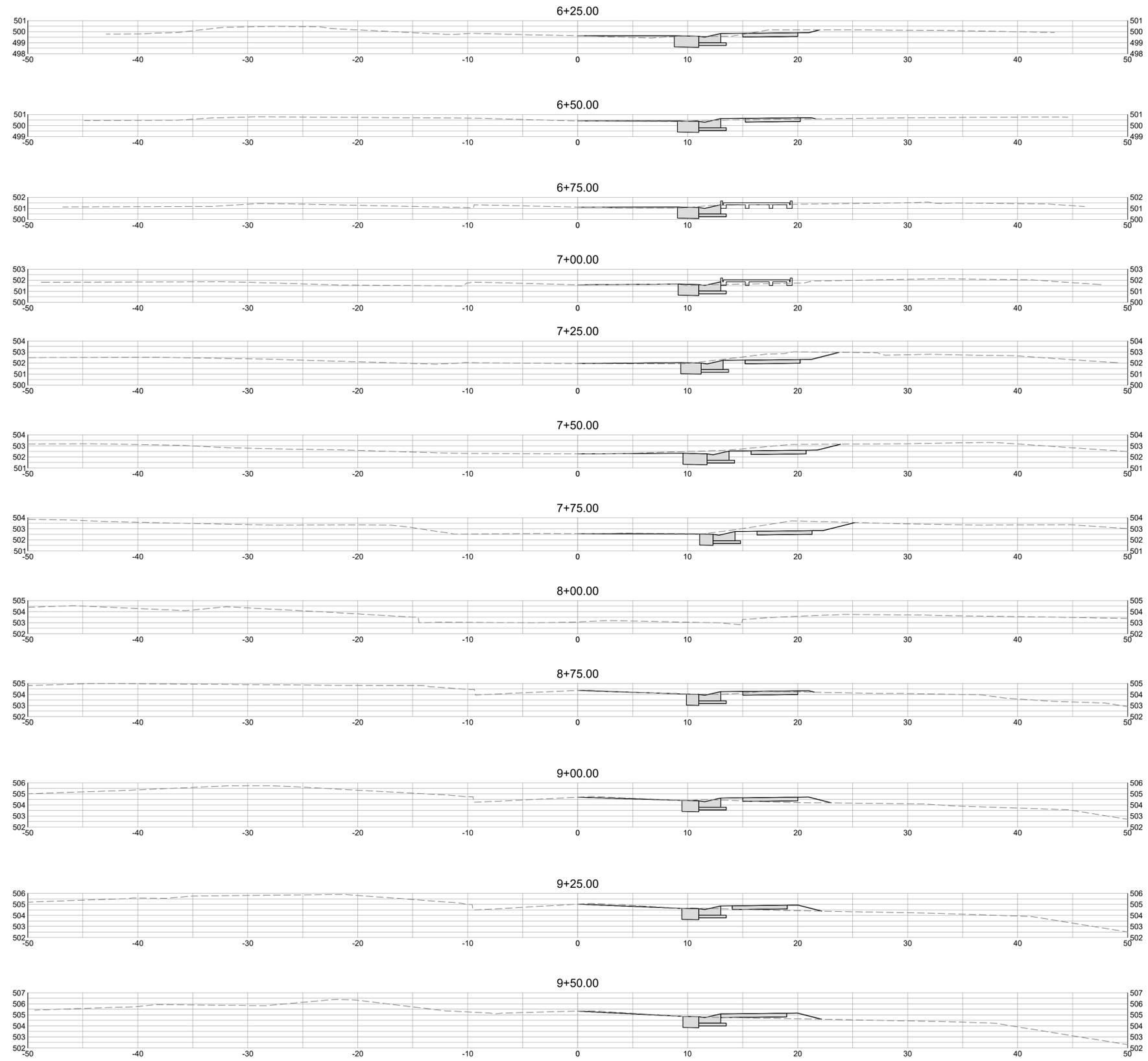
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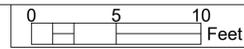




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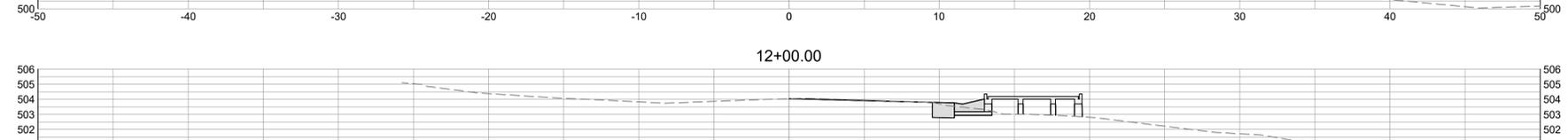
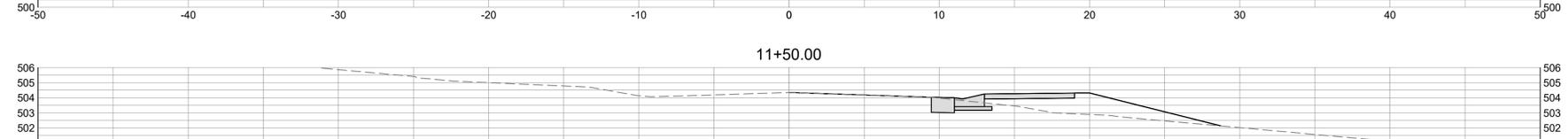
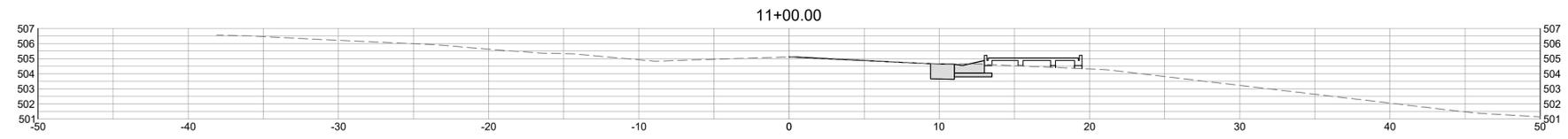
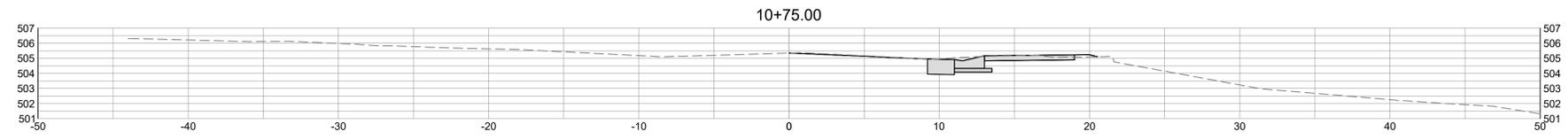
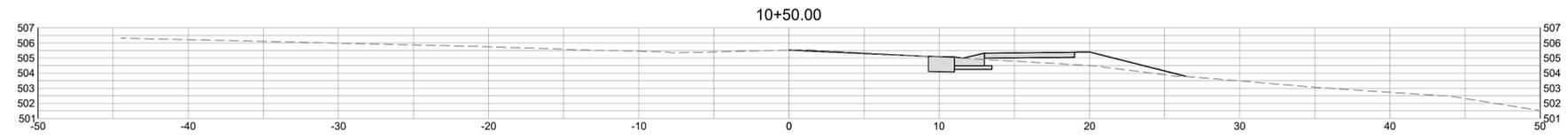
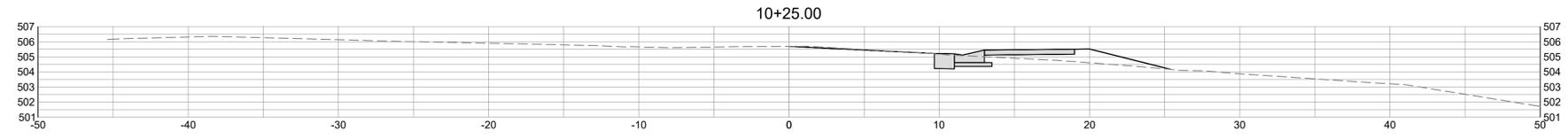
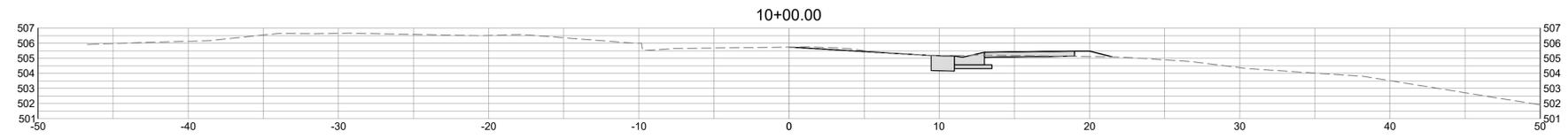
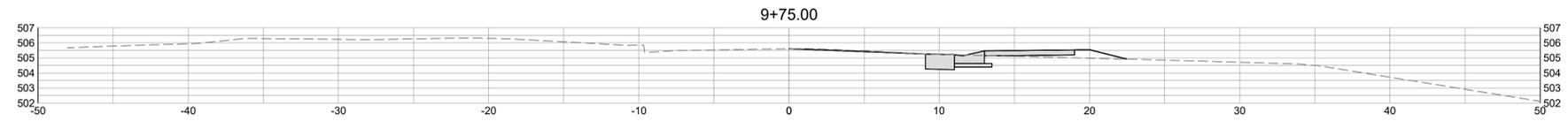
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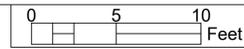




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PROJECT REFERENCE NO.

SHEET NO.  
X-5

