

MR 509
Permit No. 20-11516-06

Office Use Only

State of Ohio
Department of Transportation
Permit

County or Jurisdiction **FAY**
Rte **SR435**
Log Pt **2.913-4.084**
Acc Cat

[1] Subject to all terms, conditions, and restrictions printed, written below and on the reverse side hereof, or attached,

Name: **Fayette County Engineer**
Address: **1600 Robinson Rd Washington Court House OH 43160**

is hereby granted a permit under Section 5515.01 and 5515.02 of Ohio Revised Code, and permission to perform work necessary in the manner described and at the location indicated in the following or attached to this permit.

Other - (see attached sheet)

[2] This permit shall be in the possession of employees on site at all times who are in charge of the work and shall be shown, upon request, to any employee of the Department of Transportation.

Contact the ODOT Representative at least 10 days before work begins, also contact the ODOT Representative when work is completed for final inspection.

[3] No work authorized by this permit shall begin until the permittee has contacted and received instructions from
ODOT Representative **David Burchett**
Phone **614-833-8111**
(Authorized ODOT Employee)

NOTE: Any work performed by the permittee may be stopped if this requirement is not met.

[4] Prior to any excavation in the highway right-of-way, the Ohio Utilities Protection Service (OUPS) must be contacted in accordance with ORC Section 3781.25 to 3781.32. OUPS can be reached at 1-800-362-2764. A call must be made to OGPUPS at 1-800-925-0988.

[5] All work requiring men or vehicles within ODOT right of way shall comply with all applicable requirements of the Ohio Manual of Traffic Control Devices and Item 614 (Maintaining Traffic) of the Construction and Material Specifications, latest editions. Failure to comply with these requirements will be cause for immediate revocation or suspension of the permit until the proper traffic control devices have been provided.

[6] The permittee accepts the conditions, terms, and requirements printed, written on, or attached to this permit and understands that failure to comply fully with those conditions, terms, and requirements or any change in the use of the permit inconsistent with its terms and conditions will be considered a violation and cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Department action, up to an including removal of the installation at the permittee=s expense.

[7] Performance Bond Required? Yes No Company _____
Effective Date _____ Expiration Date _____ Amount \$ _____

[8] This permit shall be void if the work described herein does not comply with the conditions, terms, and requirements applicable to this permit, and if the work is not completed by 02/06/2021

Dated 08/06/2020

Rev 7/23/2020
(See Other Side)

General Provisions Applicable to All Permits
(Sections 5515.01 and 5515.02 of O.R.C.)

- [1] This permit is not a substitute for satisfying the rights or obligations of any other party who may have an interest in the underlying fee interest.
- [2] The granting of this permit does not convey to the permittee or to the property served any rights, title, or interest in state highway rights of way or in the design or operation of the state highway; or in any way abridge the right of the Director of the Department of Transportation in his jurisdiction over state highways. If, in the process of any future work or for the benefit of the traveling public, it becomes necessary, in the opinion of the Director of Transportation to order the removal, reconstruction, relocation, or repair of any of the fixtures, or work performed under this permit, said removal, reconstruction, relocation, or repair shall be wholly at the expense of the owners thereof or the permittee and be made as directed by the Director of Transportation. Such changes in the state highway design or operation, necessary for improved safety and operation or for the benefit of the traveling public, shall not require a permit modification since the permit confers no private rights to the permittee over the control of the state highway.
- [3] The District Deputy Director acts for and on behalf of the Director in issuing and carrying out the provisions of all permits. The District Deputy Director has full authority to ensure that all provisions of the permit are met and to reject any materials, design, and workmanship that do not meet applicable Department standards. The District Deputy Director, at his/her discretion, may require a performance bond or certified check as a prerequisite to the issuance of a permit.
- [4] Failure on the part of the permittee to comply fully with the provisions and conditions of the permit will be cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Departmental action. By accepting the permit, the permittee agrees to comply with all conditions, terms, and restrictions printed or written on or attached to the permit. If the permittee performs any work contrary to the conditions of the permit or to the instructions of the District Deputy Director and, after due notice, fails to correct the problem, the Department of Transportation may, with or without notice, correct such work and the permittee shall reimburse the Department for the costs.
- [5] The permittee shall indemnify and hold harmless the State of Ohio, Department of Transportation, its officers, representatives and assigns, from any and all loss, liability, damages, litigation costs, and claims for injury or death to any person, property, or business caused by or resulting from any act, omission, event, consequence, or occurrence, negligent or otherwise of the permittee, his employees, or assigns as a result of the issuance of this permit.
- [6] All work authorized under the permit shall be performed to the Department's satisfaction, and the entire expense shall be borne by the permittee. No work shall be performed until the permittee has contacted the Department's appointed representative named on the permit and received instructions. The Department's representative may inspect all work covered by the permit, or the Department reserves the right, during the time any or all of the work is being performed, to appoint an inspector over the work who shall represent the interest of the State on the work and any compensation arranged for shall be paid wholly by the permit holder. Work not in compliance shall be halted and the District Deputy Director shall be notified of the cause. The permittee shall be notified of the Department's action and its causes, and given an opportunity to correct the problem.
- [7] Failure to complete all work within the time specified on the permit shall void the permit, thereby making the permit illegal and subject to appropriate Departmental action. The permittee may request an extension in writing from the District Office, explaining why the extension is necessary and when the work is expected to be completed.
- [8] All work infringing on the pavement or shoulders shall comply with applicable standards and requirements regarding traffic control devices. Failure to comply will be cause for revocation or suspension of the permit. Any closure of lanes or shoulders shall be described in terms of location, duration, time of day, etc. Such work shall not begin until all traffic control devices are in place.
- [9] If any grading, sidewalk, or other work allowed by a permit interferes with the drainage of the highway in any way, such catch basins and outlets as necessary shall be constructed to take proper care of said drainage.

[10] Upon completion of the work, the permittee shall leave the highway clean of all rubbish, excess materials, temporary structures and equipment, and all parts of the highway shall be left in a condition acceptable to the Department. Upon satisfactory completion of the work authorized by the permit, the Department's appointed representative shall complete the Permit Inspection Certificate, Form No. MR 678 certifying that the permittee has complied with the terms of the permit.

[11] Except as herein authorized, no excavation shall be made or obstacle placed within the limits of the highway so as to interfere with the travel over the road.

[12] All pole lines are to be built in accordance with Rule 4901:3-1-08 of Ohio Administrative Code promulgated and enforced by the Public Utilities Commission of Ohio.

[13] The permittee shall comply with the Air Pollution requirements of Rule 3745-17-08 of the Ohio Administrative Code promulgated and enforced by the Ohio Environmental Protection Agency.

[14] The permittee certifies that he or she is fully authorized to sign this permit. This permit shall apply to and be binding upon the permittee and his/her successors in interest. No change in ownership of the underlying property or of the facility owned by permittee shall in any way alter the permittee's obligations under this permit.

[15] The permittee(s) for herself/himself/themselves/itself, her/his/their/its personal representatives, and her/his/their/its successors in interest and assigns, as a part of the consideration hereof, do/does hereby covenant and agree that:

(1) No person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of the above described property.

(2) In the construction of any improvements on, over, or under the above described property and the furnishing of services thereon, no person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination.

(3) The above described property shall be used in a manner that at all times is in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. DOT, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. DOT — Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

(4) In the event that this instrument grants a lease, license, or permit and any of the above nondiscrimination covenants is breached, then the State of Ohio, Department of Transportation, shall have the unfettered right to terminate the lease, license or permit and to re-enter and repossess the above-described property and hold the same as if said lease, license or permit had never been made or issued.

(5) In the event that this instrument grants a fee or easement interest and any of the above nondiscrimination covenants is breached, the State of Ohio, Department of Transportation, shall have the unfettered right to re-enter the above described property, and said property will thereupon revert to and vest in and become the absolute property of the State of Ohio and its successors and assigns for the use and benefit of the Department of Transportation.

(6) In the event that this instrument grants a lease, fee or easement interest, all of the foregoing nondiscrimination covenants shall be and are covenants running with the land.

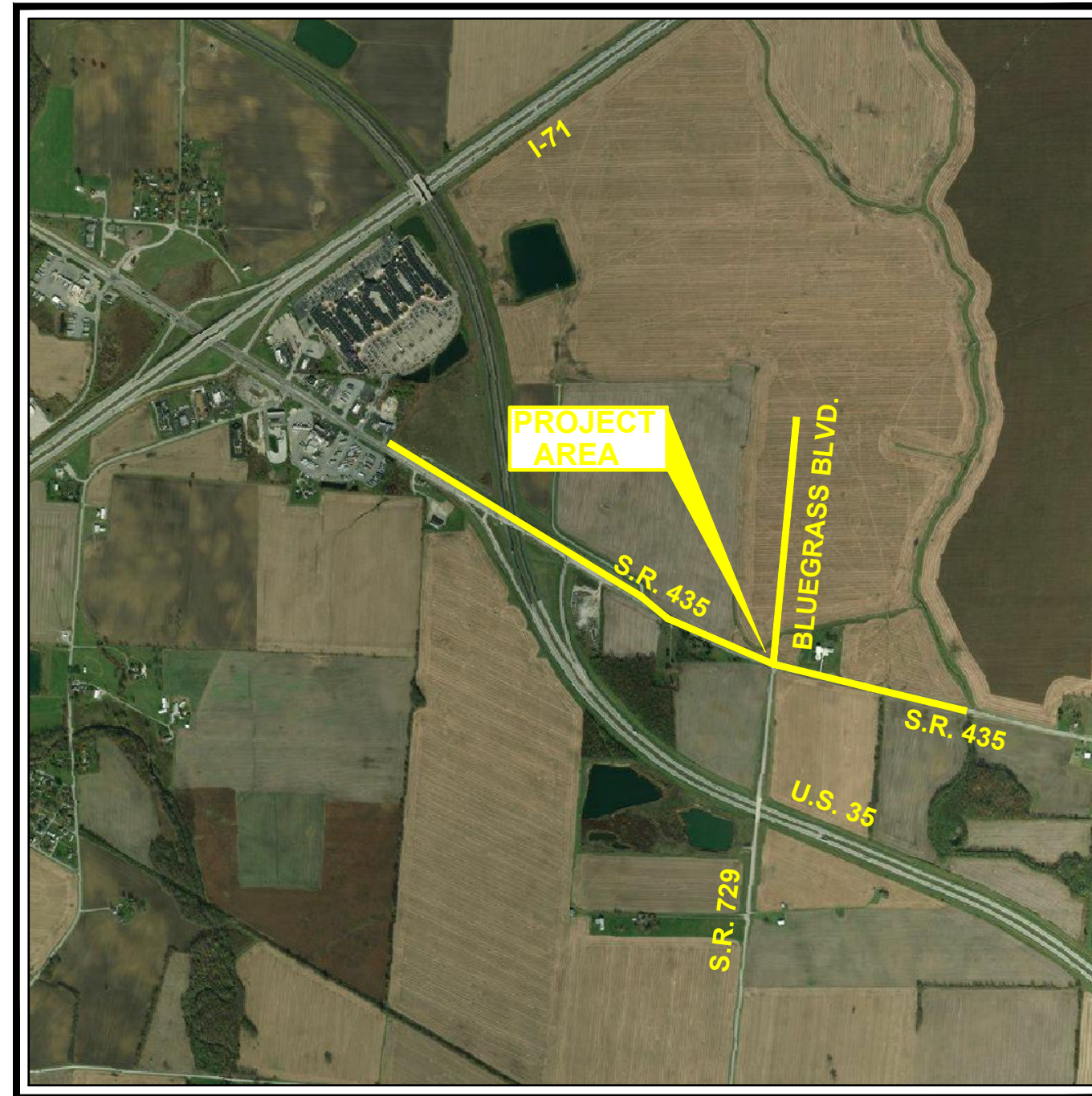
This permit is granted subject to the following attached conditions:

verification of the location of the full depth pavement with an ODOT official during the saw cut operation” as a condition of the permit.

The most recent set of plans for this work is attached this is what ODOT approved.

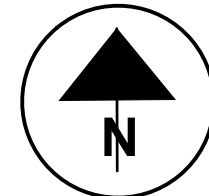
BLUEGRASS BOULEVARD ROAD CONSTRUCTION PROJECT PHASE 1

FAY-CR310-0.00
JEFFERSON TOWNSHIP
FAYETTE COUNTY



LOCATION MAP NTS

LATITUDE: N 39°-36'-37" LONGITUDE: W 83°-35'-12"



PORTION TO BE IMPROVED _____
STATE & FEDERAL ROUTES _____
OTHER ROADS _____

DESIGN DESIGNATION (S.R. 435 AND BLUEGRASS BOULEVARD)

CURRENT ADT - S.R. 435 (2015) _____ 1400
DESIGN YEAR ADT - S.R. 435 (2035) _____ 6500
CURRENT ADT - BLUEGRASS BLVD. (2015) _____ N/A
DESIGN YEAR ADT - BLUEGRASS BLVD. (2035) _____ 5000
DESIGN SPEED (S.R. 435 AND BLUEGRASS BLVD.) _____ 55 mph
LEGAL SPEED (S.R. 435 AND BLUEGRASS BLVD.) _____ 55 mph
DESIGN FUNCTIONAL CLASSIFICATION -
RURAL MAJOR COLLECTOR (S.R. 435)
RURAL MINOR COLLECTOR (BLUEGRASS BLVD.)

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811. 8-1-1. or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:



440 E. HOEWISHER ROAD • SIDNEY, OHIO 45365 • 937.497.0200
8956 GLENDALE MILFORD ROAD, SUITE 1 • LOVELAND, OHIO 45140 • 513.239.8554

www.CHOICEONEENGINEERING.com

SANITARY SEWER FACILITY OWNER
FAYETTE COUNTY DEPARTMENT OF
SANITARY SERVICES
1600 ROBINSON ROAD SOUTHEAST
WASHINGTON COURT HOUSE, OHIO 43160
ATTN: STEVEN G. LUEBBE, P.E., P.S.
FAYETTE COUNTY SANITARY ENGINEER

OHIO EPA SUBMISSION
07/02/2020

**JULY 2, 2020
FINAL TRACINGS**

APPROVED FOR CONSTRUCTION
7-02-2020

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PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF CONSTRUCTING APPROXIMATELY 2600' OF ROADWAY (BLUEGRASS BOULEVARD) ACROSS FROM SR 729 AND NORTH OF SR 435 IN JEFFERSON TOWNSHIP, FAYETTE COUNTY, OHIO. SR 435 WILL BE WIDENED FOR TURN LANES AND REPAVED. SANITARY GRAVITY SEWER, A LIFT STATION, FORCE MAIN, A BOX CULVERT, AND WATER MAIN INSTALLATION WILL BE COMPLETED AS PART OF THIS PROJECT AS WELL.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA	= 13.50 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	= 1.50 ACRES
NOTICE OF INTENT (NOI) EARTH DISTURBED AREA	= 15.00 ACRES

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

ODOT STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	1-17-20	TC-41.20	10-18-13			800	4-17-20
BP-4.1	7-19-13	TC-41.30	10-18-13			832	10-19-18
		TC-42.20	10-18-13				
DM-1.1	7-21-17	TC-52.10	10-18-13				
DM-1.2	1-18-13	TC-52.20	7-20-18				
DM-4.3	1-15-16	TC-65.10	1-17-14				
DM-4.4	1-15-16	TC-65.11	7-21-17				
		TC-71.10	1-19-18				
HW-2.2	7-20-18						
MH-1.2	1-15-16						
MT-97.10	4-19-19						
MT-97.11	1-20-17						
MT-101.90	7-21-17						
MT-105.10	1-17-20						

ENGINEERS SEAL	ENGINEERS SEAL	ENGINEERS SEAL
ROADWAY	SANITARY SEWER	WATER MAIN
SIGNED: <i>Nicholas J. Selhorst</i> DATE: 7/02/2020	SIGNED: <i>Brian J. Schmidt</i> DATE: 7/02/2020	SIGNED: <i>Jacob L. Bertke</i> DATE: 7/02/2020

APPROVED _____
DATE _____ FAYETTE COUNTY ENGINEER

APPROVED _____
DATE _____ FAYETTE COUNTY COMMISSIONER

APPROVED _____
DATE _____ FAYETTE COUNTY COMMISSIONER

APPROVED _____
DATE _____ FAYETTE COUNTY COMMISSIONER

SPECIAL PROVISIONS

FEDERAL PROJECT NO.

N/A

DRAWING NO.

CONSTRUCTION PROJECT NO.

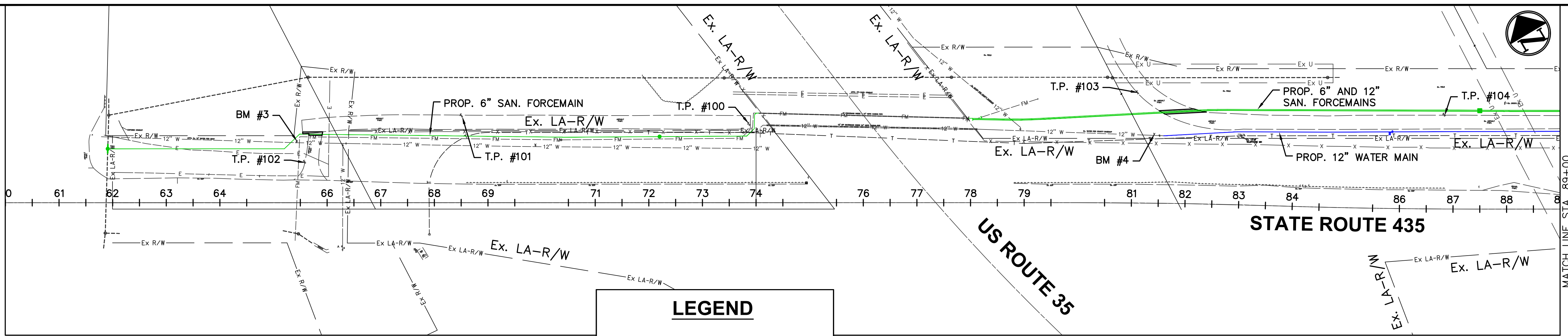
FAY-CR310-0.00

RAILROAD INVOLVEMENT

NONE

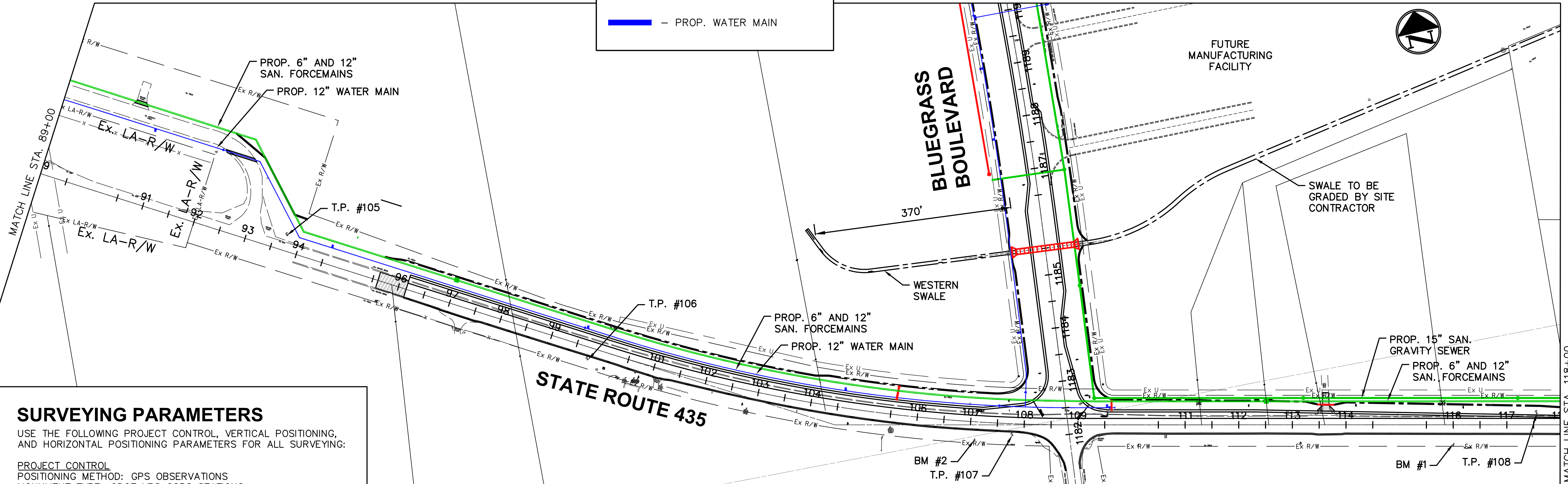
BLUEGRASS BLVD.
PHASE 1

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LEGEND

- PROP. STORM SEWER
- PROP. SANITARY SEWER
- PROP. WATER MAIN



SURVEYING PARAMETERS

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL
 POSITIONING METHOD: GPS OBSERVATIONS
 MONUMENT TYPE: ODOT VRS CORS STATIONS

VERTICAL POSITIONING
 ORTHOMETRIC HEIGHT DATUM: NAVD 88
 GEIOD: GEIOD18

HORIZONTAL POSITIONING
 REFERENCE FRAME: NAD 83 (CORS 2011 ADJUSTMENT)
 ELLIPSOID: GRS 80
 MAP PROJECTION: LAMBERT CONFORMAL CONIC
 COORDINATE SYSTEM: OHIO STATE PLANE SOUTH
 SCALE FACTOR: 1.00010168075366
 LATITUDE: N 39° 36' 43.25770"
 LONGITUDE: W 83° 35' 29.07942"
 HEIGHT: 950.533'

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET

COORDINATES
 ALL COORDINATES LISTED ARE PROJECT GROUND COORDINATES.

SURVEY CONTROL POINTS

TRAVERSE POINT #	ELEVATION	STATION	OFFSET	NORTH	EAST
100	1061.47	73+87.75	145.31' LT	590105.186	1659384.952
101	1062.97	68+51.26	161.33' LT	590392.246	1658931.435
102	1061.17	65+58.76	74.58' LT	590466.585	1658635.534
103	1057.40	81+10.37	204.83' LT	589786.859	1660038.542
104	1058.3	86+83.48	174.49' LT	589459.719	1660509.461
105	1057.34	93+73.29	29.26' LT	588983.706	1661028.278
106	1053.16	99+76.94	22.51' RT	588631.678	1661521.382
107	1050.15	107+78.67	21.37' RT	588314.57	1662261.279
108	1047.14	117+55.71	22.19' LT	588133.725	1663223.138
109	1042.50	126+69.88	22.43' RT	587883.47	1664103.518

BENCHMARK DATA

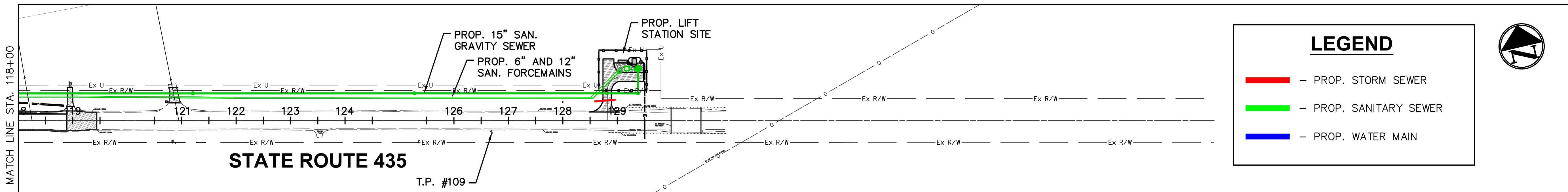
BENCHMARK #1	ELEV: 1050.60	STA. 115+99.83, 37.42' RT.
100' WEST OF TRAV. IP #108 ON SOUTH SIDE OF ROAD. RAILROAD SPIKE IN POWER POLE.		
BENCHMARK #2	ELEV: 1050.27	STA. 107+08.69, 34.98' RT.
50' WEST OF TRAV. IP #107. RAILROAD SPIKE IN POWER POLE		
BENCHMARK #3	ELEV: 1062.33	STA. 65+42.90, 115.23' LT.
ARROW BOLT ON FIRE HYDRANT APPROX 50' NORTH OF TRAV POINT 102		
BENCHMARK #4	ELEV: 1057.11	STA. 81+41.34, 129.25' LT.
ARROW BOLT ON FIRE HYDRANT APPROX 50' SW OF PC OF ACCESS ROAD ON THE WEST SIDE OF US35		

SCHEMATIC PLAN

APPROVED FOR CONSTRUCTION
7-02-2020

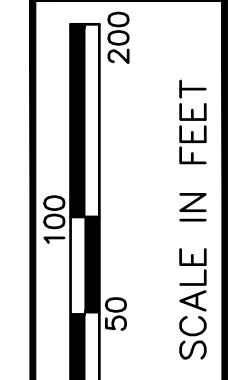
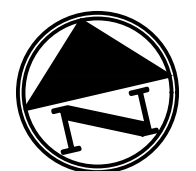
BLUEGRASS BLVD. PHASE 1

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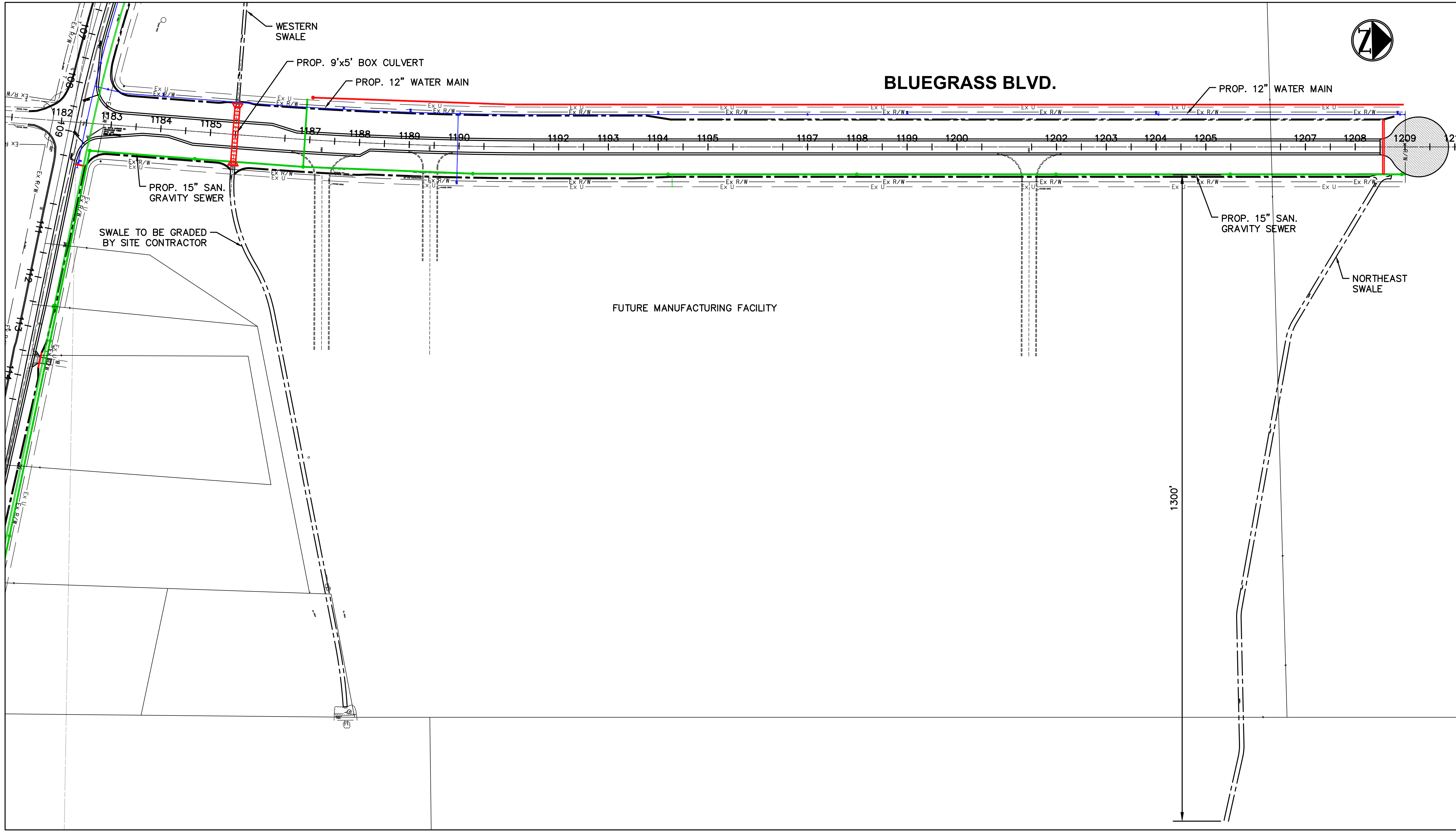


LEGEND

- PROP. STORM SEWER
- PROP. SANITARY SEWER
- PROP. WATER MAIN



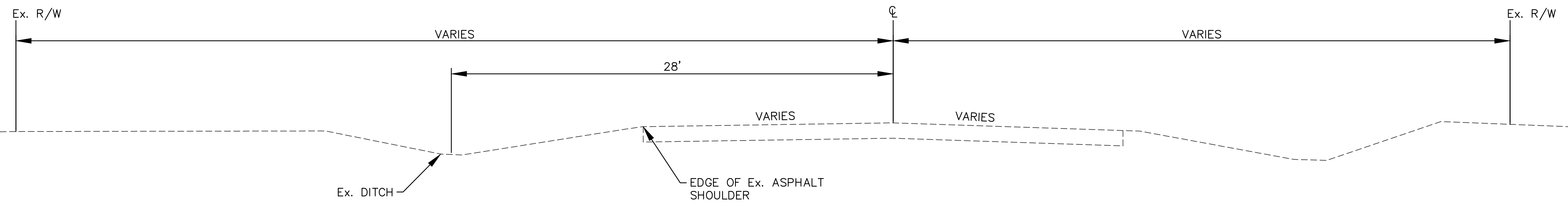
CALCULATED
JLB
CHECKED
NINS



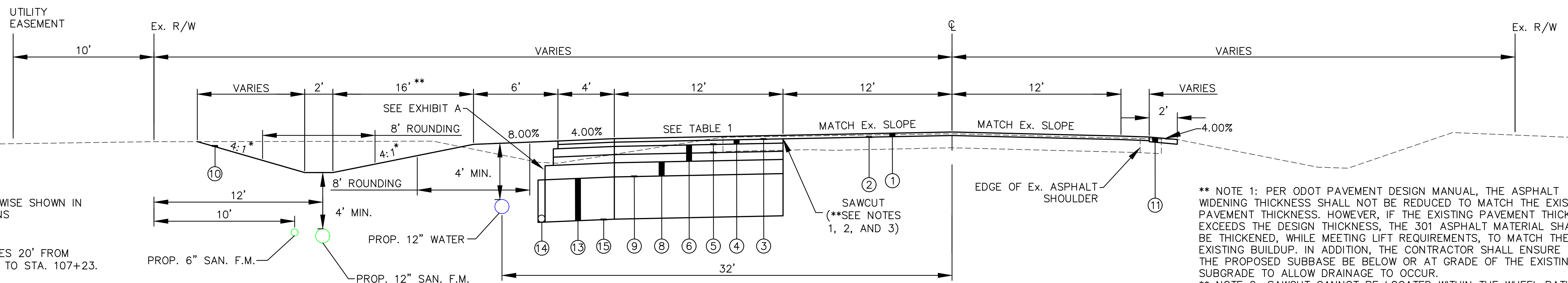
SCHEMATIC PLAN

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



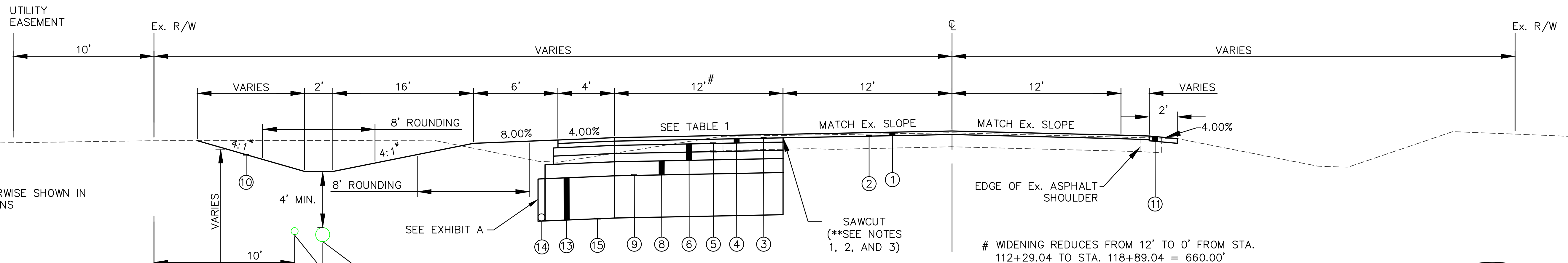
Ex. S.R. 435 2-LANE TYPICAL SECTION



S.R. 435 3-LANE TYPICAL SECTION

STA. 96+15.00 TO STA. 112+29.04 = 1614.04'

** NOTE 1: PER ODOT PAVEMENT DESIGN MANUAL, THE ASPHALT WIDENING THICKNESS SHALL NOT BE REDUCED TO MATCH THE EXISTING PAVEMENT THICKNESS. HOWEVER, IF THE EXISTING PAVEMENT THICKNESS EXCEEDS THE DESIGN THICKNESS, THE 301 ASPHALT MATERIAL SHALL BE THICKENED, WHILE MEETING LIFT REQUIREMENTS, TO MATCH THE EXISTING BUILDUP. IN ADDITION, THE CONTRACTOR SHALL ENSURE THAT THE PROPOSED SUBBASE BE BELOW OR AT GRADE OF THE EXISTING SUBGRADE TO ALLOW DRAINAGE TO OCCUR.
** NOTE 2: SAWCUT CANNOT BE LOCATED WITHIN THE WHEEL PATH
** NOTE 3: 6" OF ITEM 304 AGGREGATE PLACE TO BE LEFT IN PLACE TO PREVENT UNDERMINING OF EXISTING PAVEMENT THAT IS TO REMAIN.



S.R. 435 3-LANE TYPICAL SECTION

STA. 112+29.04 TO STA. 118+89.04 = 660.00'

WIDENING REDUCES FROM 12' TO 0' FROM STA. 112+29.04 TO STA. 118+89.04 = 660.00'

* UNLESS OTHERWISE SHOWN IN CROSS SECTIONS
** WIDTH BECOMES 20' FROM STA. 104+25 TO STA. 107+23.

* UNLESS OTHERWISE SHOWN IN CROSS SECTIONS

LEGEND

- ① ITEM 441, 1-1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (448), PG64-22
- ② ITEM 407, NON-TRACKING TACK COAT, SURFACE COURSE, (APPLIED AT 0.1 GAL./S.Y.)
- ③ ITEM 407, NON-TRACKING TACK COAT, SURFACE COURSE, (APPLIED AT 0.08 GAL./S.Y.)
- ④ ITEM 441, 1-3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, (448)
- ⑤ ITEM 407, NON-TRACKING TACK COAT, INTERMEDIATE COURSE, (APPLIED AT 0.04 GAL./S.Y.)
- ⑥ ITEM 301, 7" ASPHALT CONCRETE BASE, PG64-22 (IN 2 EQUAL LIFTS, 6" MAX)
- ⑦ ITEM 301, 9" ASPHALT CONCRETE BASE, PG64-22 (IN 2 EQUAL LIFTS)
- ⑧ ITEM 304, 6" AGGREGATE BASE
- ⑨ ITEM 204, SUBGRADE COMPACTION
- ⑩ ITEM 659, SEEDING AND MULCHING, CLASS 2
- ⑪ ITEM 411, 4" STABILIZED CRUSHED AGGREGATE
- ⑫ ITEM 206, CEMENT STABILIZED SUBGRADE, 14" DEEP, AS PER PLAN
- ⑬ ITEM 204, 18" GRANULAR MATERIAL, TYPE B
- ⑭ ITEM 605, 6" BASE PIPE UNDERDRAINS
- ⑮ ITEM 204, GEOGRID

TABLE 1

STATION RANGE	ROADWAY SLOPE
STA. 96+15 TO STA. 99+25	1.60%
STA. 99+25 TO STA. 102+00	TRANSITION FROM 1.60% TO 4.50%
STA. 102+00 TO STA. 107+75	4.50%
STA. 107+75 TO STA. 109+50	SEE INTERSECTION DETAILS
STA. 109+50 TO STA. 110+25	TRANSITION FROM 2.47% TO 1.60%
STA. 110+25 TO STA. 118+89	1.60%

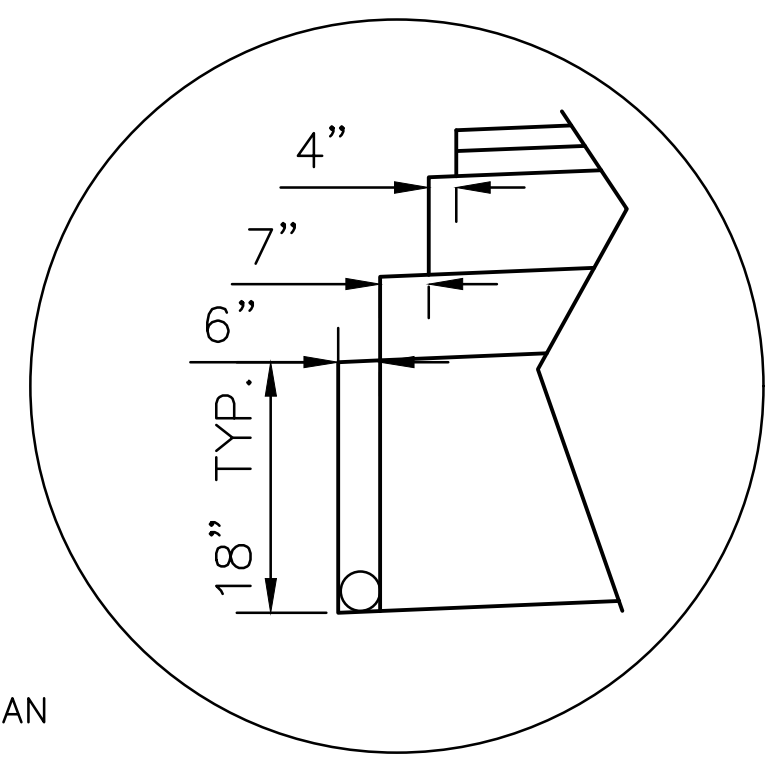


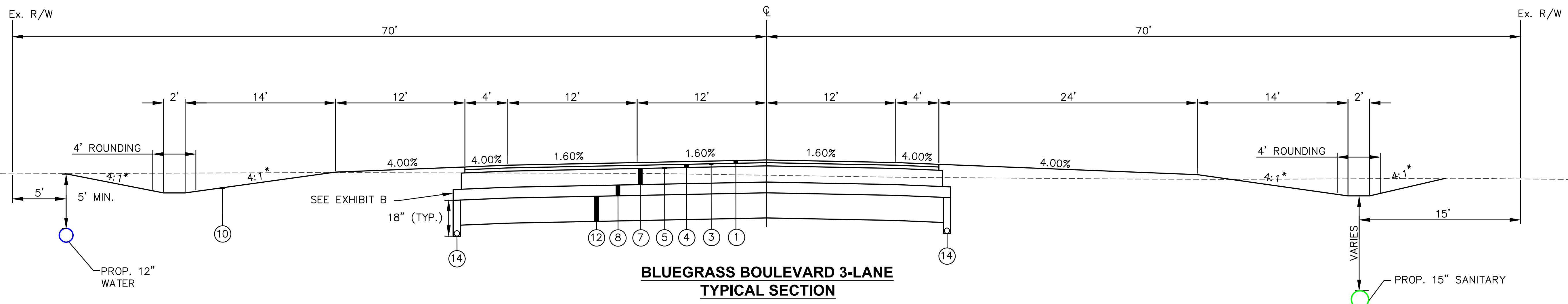
EXHIBIT A

CALCULATED
JLB
CHECKED
NNS

TYPICAL SECTIONS

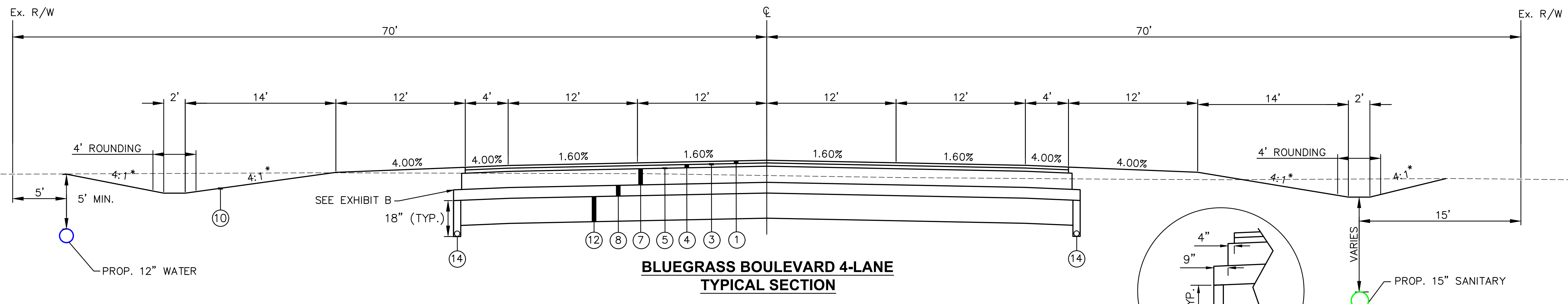
APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



**BLUEGRASS BOULEVARD 3-LANE
TYPICAL SECTION**

STA. 1183+21.10 TO STA. 1184+16.00 = 94.90'
STA. 1184+16.00 TO STA. 1184+66.00 - TRANSITION TO 4-LANE TYPICAL



**BLUEGRASS BOULEVARD 4-LANE
TYPICAL SECTION**

STA. 1184+66.00 TO STA. 1186+22.74 = 156.74'
STA. 1186+22.74 TO STA. 1187+91.34 - TRANSITION TO 2-LANE TYPICAL

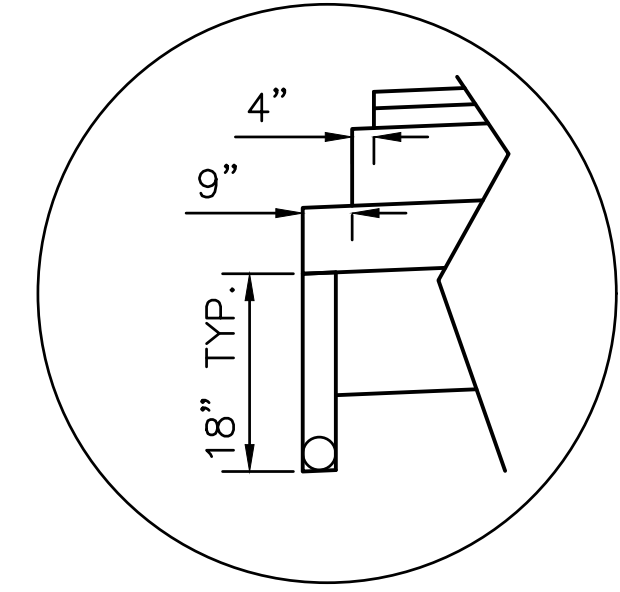
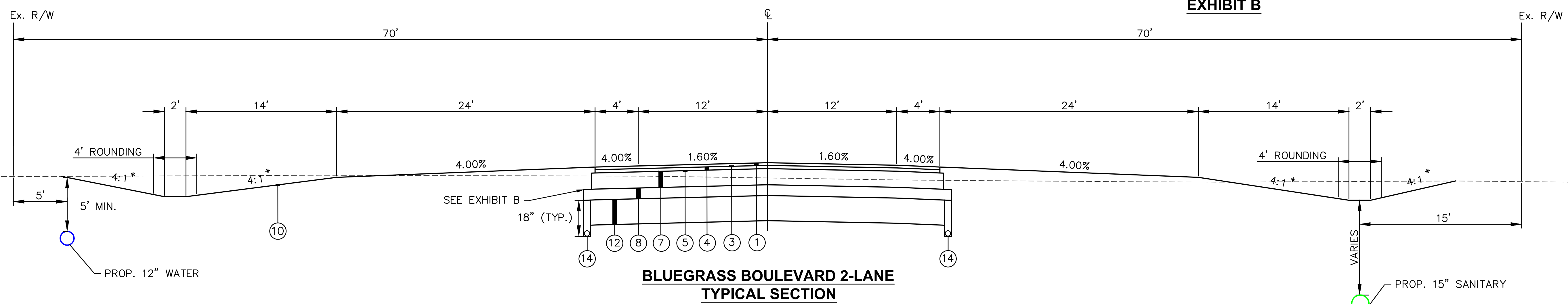


EXHIBIT B



**BLUEGRASS BOULEVARD 2-LANE
TYPICAL SECTION**

STA. 1187+91.34 TO STA. 1208+50.00 = 2058.66'

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NAVD 88 (ODOT VRS GEOID 12B).

GENERAL NOTES AND DETAILS

ALL CONSTRUCTION METHODS, MATERIALS, AND SPECIFICATIONS SHALL COMPLY WITH THE FAYETTE COUNTY ENGINEERING STANDARDS AND SPECIFICATIONS OR OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE RESTRICTIVE AS DETERMINED BY THE COUNTY.

MODIFICATIONS

ANY MODIFICATIONS TO THE SPECIFICATIONS OR CHANGES TO THE WORK AS SHOWN ON THE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE COUNTY.

RECORD DRAWINGS

THE CONTRACTOR SHALL PROVIDE 2 COMPLETE SETS OF RECORD DRAWINGS TO THE COUNTY WITHIN 30 DAYS OF PROJECT COMPLETION. THESE DRAWINGS SHALL SHOW ALL CHANGES TO THE ORIGINAL DRAWINGS, ALL MANHOLE AND CATCH BASIN LOCATIONS AND INVERTS, ALL LATERAL LOCATIONS AND DEPTHS, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION, AND ALL OTHER PERTINENT DATA TO THE IMPROVEMENTS. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO THE OTHER ITEMS PAID FOR IN THIS PROJECT.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC. EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION ACCORDING TO THE BEST AVAILABLE DATA. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING THEM IN THE FIELD PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THEM. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) 48 HOURS PRIOR TO CONSTRUCTION.

NON-MEMBERS MUST BE CALLED DIRECTLY.

UTILITY OWNERSHIP

TELEPHONE

AT&T
7201 FAR HILLS AVENUE
DAYTON, OHIO 45459
ATTN: HOWARD LAUDERMILK II
(937) 296-3588

GAS

DOMINION TRANSMISSION
518 EAST PITTSBURGH STREET
GREENSBURG, PA 15601
ATTN: ANGEL MARRERO
(724) 468-7723

ELECTRIC

DP&L
1900 DRYDEN ROAD
DAYTON, OHIO 45439
(937) 331-4521
ATTN: BILL GOURLEY
DISTRIBUTION:
ATTN: BILL WARD
(937) 554-9063

SANITARY - FAYETTE COUNTY

FAYETTE COUNTY DEPARTMENT OF
SANITARY SERVICES
133 SOUTH MAIN STREET, SUITE L-22
WASHINGTON COURT HOUSE, OH 43160
ATTN: STEVE LUEBBE
(740) 333-3538

OHIO UTILITIES PROTECTION SERVICES
2 WORKING DAYS BEFORE YOU DIG
CALL TOLL FREE (1-800-362-2784)

CLEAN WATER CONNECTIONS

ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED.

SUBCONTRACTOR SUPERVISION

THE CONTRACTOR IS REQUIRED TO HAVE A PROJECT SUPERVISOR ON-SITE TO SUPERVISE THE SUBCONTRACTOR FOR QUALITY CONTROL PURPOSES AND TO PROVIDE ANY NECESSARY ASSISTANCE TO THE SUBCONTRACTOR TO ENSURE QUALITY WORK.

UTILITY INTERFERENCE

IF, DURING CONSTRUCTION, INTERFERENCE ARISES WITH EXISTING UTILITIES, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE UTILITY COMPANY INVOLVED. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS. THE CONTRACTOR SHALL NOTIFY, AT LEAST 7 DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE COMPANIES HAVING WIRES, POLES, PIPES, CONDUITS, MANHOLES, OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. THERE WILL BE NO DELAYS ALLOWED FOR UTILITY INTERFERENCES.

LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL UTILITIES, AND STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE METHOD OF SUPPORT OR PROTECTION MUST BE APPROVED BY THE APPROPRIATE UTILITY COMPANY, AND IF FACILITY IS DAMAGED BY THE CONTRACTOR, ALL REPAIRS SHALL BE MADE BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR IS HEREBY ADVISED THAT ALL UTILITY COMPANIES AFFECTED BY THIS PROJECT MAY BE WORKING CONCURRENTLY WITHIN THE PROJECT LIMITS. NO ADDITIONAL COMPENSATION WILL BE MADE TO THE CONTRACTOR FOR COORDINATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE UTILITY COMPANIES.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND BEFORE FINAL ACCEPTANCE BY THE COUNTY, REPRESENTATIVES OF THE COUNTY AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWER THAT MAY BE AFFECTED BY THE WORK AND ARE TO REMAIN IN SERVICE. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE COUNTY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE COUNTY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY.

EXISTING DRAINAGE FACILITIES

ANY DRAINAGE CONDUIT CURRENTLY CONNECTED TO THE EXISTING STORM SEWER SHALL BE CONNECTED TO THE PROPOSED STORM SEWER. ANY DRAINAGE CONDUIT DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. ALL CONDUIT REMOVED, REPLACED AND/OR CONNECTED TO THE STORM SEWER SHALL BE NOTED ON THE RECORD DRAWINGS AND SHALL BE INSPECTED BY THE COUNTY BEFORE IT IS COVERED.

A CONCRETE COLLAR SHALL BE PROVIDED WHERE PROPOSED STORM SEWER PIPE IS CONNECTED TO AN EXISTING PIPE.

ALL FIELD OR STORM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS OR PLUGGED AS APPROVED AND DIRECTED BY THE COUNTY.

THE LOCATION, TYPE, SIZE, AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE COUNTY OR COUNTY'S REPRESENTATIVE DURING CONSTRUCTION.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION, OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE COUNTY SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT ANY EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE COUNTY SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

WATER MAIN SEPARATION

WHENEVER A SANITARY SEWER AND A WATER MAIN MUST CROSS, THE SEWER SHALL BE LAID BELOW THE WATER MAIN AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18" BELOW THE BOTTOM OF THE WATER MAIN PIPE. IF IT IS ABSOLUTELY IMPOSSIBLE TO MAINTAIN THE 18" VERTICAL SEPARATION, THE SEWER SHALL BE EITHER CONSTRUCTED OF EITHER SLIP-ON OR MECHANICAL JOINT WATER MAIN MATERIAL AND BE PRESSURE TESTED TO 150 PSI TO ENSURE WATER-TIGHTNESS OR BE ENCASED IN A ¼" THICK CONTINUOUS STEEL, DUCTILE IRON OR PRESSURE RATED, DR 18 OR LESS PVC PIPE FOR A DISTANCE OF 10 FEET ON EITHER SIDE OF THE CROSSING. THE SEWER SHALL BE THE LONGEST STANDARD LENGTH AVAILABLE AND BE CENTERED AT THE POINT OF CROSSING SO THE JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN.

WHENEVER A STORM SEWER AND A WATER MAIN MUST CROSS, THE PIPES SHALL BE LAID AT SUCH ELEVATIONS THAT THE CROWN OF ONE PIPE IS AT LEAST 18" BELOW THE BOTTOM OF THE OTHER.

WATER MAIN MUST BE INSTALLED WITH A MINIMUM OF 10' HORIZONTAL SEPARATION FROM ALL STORM AND SANITARY SEWERS, MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.

SAFETY

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.

MUD

THE TRACKING OR SPILLING OF MUD, DIRT, OR DEBRIS UPON PUBLIC STREETS IS PROHIBITED, AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR.

PROPERTY POINTS AND SURVEY MONUMENTS

CARE SHALL BE TAKEN BY THE CONTRACTOR TO SAFEGUARD ANY PROPERTY POINTS OR OTHER SURVEY REFERENCE MARKS ENCOUNTERED DURING CONSTRUCTION OF THIS PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESET ANY PROPERTY POINT OR SURVEY MONUMENT WHICH IS DISTURBED AS A RESULT OF CONSTRUCTION OF THIS PROJECT. THE PROPERTY POINTS AND SURVEY MONUMENTS SHALL BE RESET UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL SURVEYOR.

NONRUBBER TIRE VEHICLES

NO NONRUBBER TIRE VEHICLES SHALL BE MOVED ON PUBLIC STREETS. EXCEPTIONS MAY BE GRANTED BY THE COUNTY WHERE SHORT DISTANCES AND SPECIAL CIRCUMSTANCES ARE INVOLVED. GRANTING OF EXCEPTIONS MUST BE IN WRITING AND ANY RESULTING DAMAGE MUST BE REPAIRED TO THE SATISFACTION OF THE COUNTY. THE CONTRACTOR SHALL USE EXTREME CARE WHEN OPERATING NONRUBBER TIRE VEHICLES ON STREETS OR DRIVEWAYS TO AVOID MARKING OR DAMAGING THE PAVEMENT. PROTECTION OF THE PAVEMENT FROM DAMAGE RESULTING FROM THE TRACKS OF NONRUBBER TIRE VEHICLES UTILIZED IN TRENCH EXCAVATION SHALL BE REQUIRED. A WOOD PLANK SYSTEM, USED TIRES, RUBBER MATS, OR OTHER MEANS AS APPROVED BY THE COUNTY'S REPRESENTATIVE SHALL BE USED TO PROTECT THE PAVEMENT.

CONSTRUCTION NOISE

IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICES SHALL NOT BE OPERATED BETWEEN THE HOURS SPECIFIED IN THE COUNTY NOISE ORDINANCE. IF THERE IS NO NOISE ORDINANCE IN PLACE, POWER-OPERATED CONSTRUCTION-TYPE DEVICES SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 PM TO 7:00AM.

WORK LIMITS

ALL WORK SHALL BE WITHIN EXISTING OR PROPOSED RIGHT-OF-WAY AND/OR CONSTRUCTION LIMITS UNLESS OTHERWISE INSTRUCTED BY THE COUNTY.

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3" BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. CONTRACTOR SHALL HAVE ONSITE STEEL PLATES FOR MAINTENANCE OF TRAFFIC AS DEEMED NECESSARY BY THE COUNTY IF THE 3" TOLERANCE IS NOT MET. CONTRACTOR SHALL ALSO PROVIDE ANY DRIVEWAY RAMPING NEEDED DURING PAVEMENT REMOVAL.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

ITEM 206 CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 206 CHEMICALLY STABILIZED SUBGRADE, EXCEPT AS HEREIN MODIFIED.

FOR THE CURING COAT, THE CONTRACTOR SHALL USE ODOT CURING MATERIAL 705.07 TYPE 2. THE CURING COMPOUND SHALL BE APPLIED AT A RATE OF 1 GALLON PER 150 SQUARE FEET. NO MIXTURE DESIGN PAY ITEM IS INCLUDED, THEREFORE, THE SPREADING RATE FOR THE CEMENT SHALL BE 6%.

THIS ITEM OF WORK SHALL INCLUDE THE FOLLOWING ITEMS: CEMENT STABILIZED SUBGRADE, CEMENT, CURING COAT, AND TEST ROLLING.

PAYMENT FOR ITEM 206 CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT SQUARE YARD BID PRICE AND SHALL INCLUDE ALL MATERIAL, LABOR, AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

CALCULATED
JLB
CHECKED
NNS

GENERAL NOTES

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

6
77

ITEM 614 MAINTAINING TRAFFIC

IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITHIN THESE PLANS WITH THE LEAST INCONVENIENCE TO, AND THE MAXIMUM SAFETY OF, THE CONTRACTOR, LOCAL MERCHANTS, PEDESTRIAN TRAFFIC, AND THE TRAVELING PUBLIC.

REQUIREMENTS FOR MAINTAINING TRAFFIC AS SPECIFIED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (CURRENT EDITION, LATEST REVISION), PERTINENT PROVISIONS OF THE "OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS" (INCLUDING SUPPLEMENTAL SPECIFICATIONS) AND APPLICABLE STANDARD CONSTRUCTION DRAWINGS SHALL APPLY TO THIS PROJECT IN ADDITION TO THE FOLLOWING NOTES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE AND EFFECTIVE VEHICULAR TRAFFIC CONTROL 24 HOURS A DAY FOR THE DURATION OF THIS PROJECT. THIS WILL INCLUDE PROVIDING, PLACING, MAINTAINING, AND SUBSEQUENTLY REMOVING ALL NECESSARY TRAFFIC CONTROL MEASURES FOR ALL PROPOSED CONSTRUCTION OPERATIONS.

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE COUNTY THE NAME(S) AND TELEPHONE NUMBER(S) OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS A DAY BY THE COUNTY, OR ANY OTHER INTERESTED POLICE AGENCY.

THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR REPAIRING AND/OR REPLACING ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN THE SAFETY OF THE TRAVELED PAVEMENT FOR THE DURATION OF THIS PROJECT. THIS PERSON SHALL HAVE AVAILABLE ALL MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED REPAIRS WITHIN A REASONABLE PERIOD OF TIME AS PER C.M.S. 614.14.

THE PLANS DESCRIBE A PREFERRED CONSTRUCTION SEQUENCE AND A MAINTENANCE OF TRAFFIC PLAN FOR THE ROADWAY WIDENING PORTION OF THE PROJECT ON S.R. 435. WORK INVOLVING THE UTILITIES EXTENSION PHASES, INCLUDING SANITARY, WATER, AND THE SANITARY PUMP STATION, SHALL BE MAINTAINED PER OMUTCD AND ODOT'S TRAFFIC ENGINEERING MANUAL. THE CONTRACTOR, IN AN EFFORT OF VALUE ENGINEERING, CAN ALSO SUBMIT A CONSTRUCTION SEQUENCING SCHEDULE PRIOR TO WORK BEGINNING FOR APPROVAL BY THE OHIO DEPARTMENT OF TRANSPORTATION AND THE COUNTY. THE CONSTRUCTION SEQUENCING SCHEDULE SHALL TAKE INTO CONSIDERATION ALL ASPECTS OF THE PROJECT INCLUDING HOW LOCAL TRAFFIC TO THE BUSINESSES WILL BE MAINTAINED. THE CONSTRUCTION SEQUENCE WILL NEED TO BE APPROVED BY THE STATE AND THE COUNTY PRIOR TO ANY COMMENCEMENT OF WORK.

ACCESS FOR PROPERTY OWNERS AND BUSINESS TRAFFIC SHALL BE MAINTAINED IN A UNIFORM PATTERN THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT AND SHALL NOT BE SUBJECTED TO CONSTANT LANE SHIFTS.

ACCESS TO AND FROM ALL LOCAL RESIDENTIAL AND BUSINESS DRIVES WITHIN THE LIMITS OF THIS PROJECT SHALL BE MAINTAINED AT ALL TIMES (24 HOURS A DAY) BY USING THE EXISTING PAVEMENT, TEMPORARY PAVEMENT, AND THE PROPOSED PAVEMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEQUENCE HIS WORK TO HELP MINIMIZE THE NEED FOR TEMPORARY AGGREGATE PAVEMENT. TEMPORARY AGGREGATE PAVEMENT CAN BE ASPHALT GRINDINGS OR OTHER AGGREGATE APPROVED BY THE COUNTY. THE COST OF INSTALLATION, MATERIAL, AND REMOVAL OF THE TEMPORARY AGGREGATE PAVEMENT IS TO BE PART OF THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.

WHERE MORE THAN ONE ACCESS TO A BUSINESS OR RESIDENCE EXISTS, ONLY ONE ACCESS NEEDS TO BE MAINTAINED AT A TIME. WHERE ONLY ONE DRIVE EXISTS, ACCESS SHALL BE MAINTAINED AT ALL TIMES BY CONSTRUCTION OF ONE-HALF OF THE DRIVEWAY AT ONE TIME, SUBJECT TO THE APPROVAL OF THE COUNTY.

ANY DAMAGE TO MAINTENANCE OF TRAFFIC EQUIPMENT SUCH AS SIGNS, BARRELS, ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR WILL BE REQUIRED TO PROVIDE, ERECT, MAINTAIN (IN PROPER POSITION, CLEAN AND LEGIBLE, AND IN GOOD WORKING CONDITION), AND SUBSEQUENTLY REMOVE ALL LIGHTS, SIGNS, CONES, BARRICADES, EXISTING PAVEMENT MARKINGS, AND ANY OTHER TRAFFIC CONTROL DEVICES NECESSARY FOR THE MAINTENANCE OF TRAFFIC.

THE CONTRACTOR SHALL ADJUST THE LOCATION AND/OR SPACING OF ALL TRAFFIC CONTROL CHANNELING DEVICES AS DICTATED BY THE PROGRESS OF THE REQUIRED WORK TO ALLOW CONSTRUCTION ACCESS TO WORK AREAS WHILE MAINTAINING SAFE AND EFFECTIVE TRAFFIC CONTROL DURING ALL CONSTRUCTION OPERATIONS. THE ORIGINAL LOCATION, PLACEMENT, SPACING AND SUBSEQUENT RELOCATION OR REMOVAL OF ALL TRAFFIC CONTROL DEVICES SHALL BE SUBJECT TO ODOT AND THE COUNTY'S APPROVAL.

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES. DURING WHICH TIMES TWO-WAY TRAFFIC CAN NOT BE MAINTAINED, THE CONTRACTOR SHALL PROVIDE FLAGGERS OR SIGNAL CONTROLLED CLOSURE TO MAINTAIN TWO-WAY TRAFFIC ON A SINGLE LANE AS DETAILED IN STD. DWG. MT-96.11 AND MT-97.10.

IF, IN THE OPINION OF THE COUNTY OR ODOT, THE LANE CLOSURE IS NOT JUSTIFIED, THEY MAY ORDER ALL OR PART OF THE LANE CLOSURE REOPENED TO LOCAL TRAFFIC (UNTIL SUCH TIME THIS CONDITION IS CORRECTED.)

THE CONTRACTOR SHALL FURNISH AND INSTALL ADVANCE WARNING "ROAD WORK AHEAD" (W20-1) SIGNS AND "END ROAD WORK" (G20-2) SIGNS, PLACED AT EACH CROSSROAD IN THE PROJECT AREA, AS WELL AS OTHER NECESSARY MAINTENANCE OF TRAFFIC SIGNS.

THE CONTRACTOR SHALL NOTIFY THE COUNTY AND ODOT OF ANY INTENDED CHANGES TO ANY EXISTING OR TEMPORARY TRAFFIC CONTROL DEVICES AND SHALL OBTAIN THE BOTH AGENCY APPROVAL PRIOR TO MAKING THE CHANGES. THE CONTRACTOR SHALL ALSO NOTIFY THE ODOT, THE COUNTY, AND LOCAL NEWSPAPER FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY INTENDED LANE CLOSURES OUTSIDE THE STANDARD FLAGGING REQUIREMENTS.

MAINTENANCE OF TRAFFIC WILL BE PERFORMED IN PHASES DURING CONSTRUCTION OF THE PROPOSED PROJECT. NO PHASES INVOLVE DETOURS.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT COURSES.

TRENCH WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE COMPLETED ON THE NORTH SIDE OF THE ROADWAY. THE CONTRACTOR HAS THE OPTION TO SPLIT THE WIDENING IN TWO TWO SUB-PHASES, COMPLETING THE EASTERN AND WESTERN SIDES OF BLUEGRASS BOULEVARD AT DIFFERENT TIMES. THE OPEN TRENCHES SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT APPROVAL BY ODOT AND THE COUNTY.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 12 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF ODOT AND THE COUNTY.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY ODOT AND THE COUNTY IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW ODOT AND THE COUNTY TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICER (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY ODOT AND THE COUNTY.

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS >12 HOURS < 2 WEEKS <12 HOURS	21 CALENDAR DAYS 14 CALENDAR DAYS 4 BUSINESS DAYS
LANE CLOSURE & RESTRICTIONS	>= 2 WEEKS < 2 WEEKS	14 CALENDAR DAYS 5 BUSINESS DAYS
START OF CONSTR.	N/A	14 CALENDAR DAYS

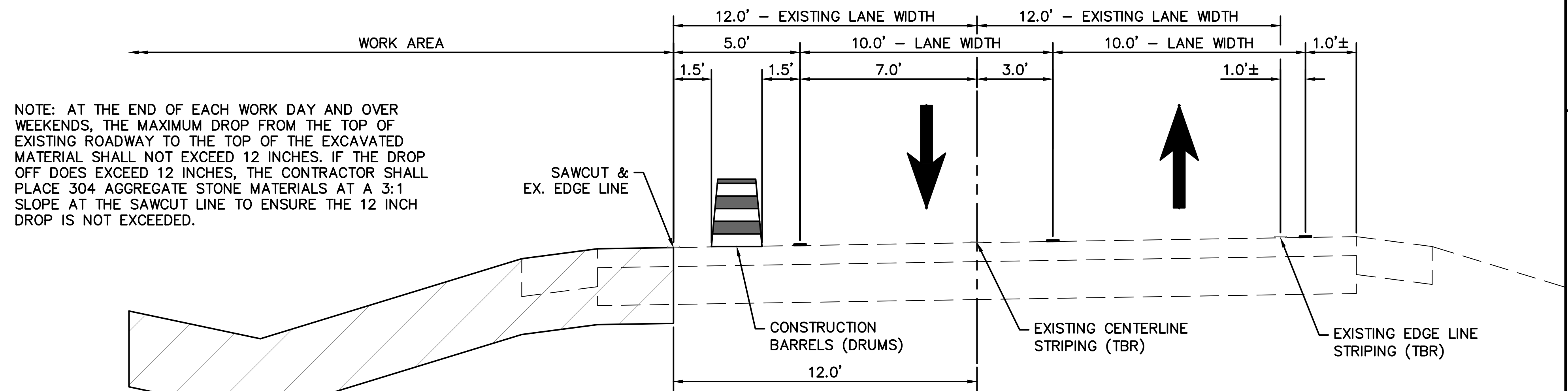
ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO ODOT AND THE COUNTY USING THE NOTIFICATION TABLE.

SEQUENCE OF CONSTRUCTION

PRE-PHASE 1: BLUEGRASS BOULEVARD CONSTRUCTION, UTILITY EXTENSIONS, AND SITE GRADING SHALL ALL BE COMPLETED PRIOR TO COMMENCEMENT ON THE S.R. 435 ROADWAY WIDENING, EXCEPT FOR FINAL ASPHALT SURFACE COURSE, PAVEMENT STRIPING, AND FINAL SIGNAGE. THE CONTRACTOR SHALL FOLLOW ODOT SPECIFICATIONS, OMUTCD, AND ODOT'S TRAFFIC ENGINEERING MANUAL FOR TEMPORARY TRAFFIC CONTROLS TO MAINTAIN TRAFFIC DURING CONSTRUCTION. TWO-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT WHEN TEMPORARY FLAGGING OPERATIONS ARE NECESSARY TO CONNECT BLUEGRASS BOULEVARD TO S.R. 435. IN THESE INSTANCES, SINGLE LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED USING FLAGGING OPERATIONS DURING DAYTIME HOURS ONLY.

PHASE 1: CONTRACTOR SHALL MAINTAIN TRAFFIC ACCORDING TO THE MAINTENANCE OF TRAFFIC PLAN - PHASE 1 BY SHIFTING VEHICLES TO THE SOUTHERN PORTION OF THE EXISTING ROADWAY AND ASPHALT SHOULDER. THE CONTRACTOR SHALL CONSTRUCT THE NORTHERN S.R. 435 ROADWAY WIDENING ON EITHER SIDE OF BLUEGRASS BOULEVARD AT THE SAME TIME, OR IN TWO DIFFERENT SUB-PHASES. HOWEVER, THE MOT LANE SHIFT SHALL BE FOR THE FULL LENGTH AT ALL TIMES, AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL FILL THE EXCAVATED ROADWAY AT THE DROP OFF WITH 304 STONE AGGREGATES AT A 3:1 SLOPE AT THE END OF EACH WORK DAY TO ENSURE THAT THE DROP OFF FROM THE TOP OF EXISTING PAVEMENT TO THE TOP OF THE FILLED STONE IS 12 INCHES OR LESS.

PHASE 2: NO DETAILED MAINTENANCE OF TRAFFIC PLANS HAVE BEEN PROVIDED FOR PHASE 2 CONSTRUCTION. CONTRACTOR SHALL MAINTAIN TRAFFIC THROUGH THE USE OF FLAGGERS AND LANE SHIFTS TO COMPLETE THE REMAINING PHASES OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO PAVEMENT PLANING AND RESURFACING, FINAL GRADING, REMOVAL OF TEMPORARY PAVEMENT OR AGGREGATES, PLACING AGGREGATE SHOULDERS, PERMANENT STRIPING, AND FINAL SIGNAGE INSTALLATION. CONTRACTOR SHALL FOLLOW GUIDELINES FROM OMUTCD AND APPROPRIATE ODOT STANDARD CONSTRUCTION DRAWINGS TO MAINTAIN TRAFFIC.



NOTE: AT THE END OF EACH WORK DAY AND OVER WEEKENDS, THE MAXIMUM DROP FROM THE TOP OF EXISTING ROADWAY TO THE TOP OF THE EXCAVATED MATERIAL SHALL NOT EXCEED 12 INCHES. IF THE DROP OFF DOES EXCEED 12 INCHES, THE CONTRACTOR SHALL PLACE 304 AGGREGATE STONE MATERIALS AT A 3:1 SLOPE AT THE SAWCUT LINE TO ENSURE THE 12 INCH DROP IS NOT EXCEEDED.

TYPICAL SECTION - MOT PHASE 1

TEMPORARY STRIPING SHALL BE 642 PAINT AT FULL RATE OF APPLICATION. THE TEMPORARY STRIPING WILL BE REMOVED DURING THE MILLING AND RESURFACING PHASE OF CONSTRUCTION (PHASE 2)

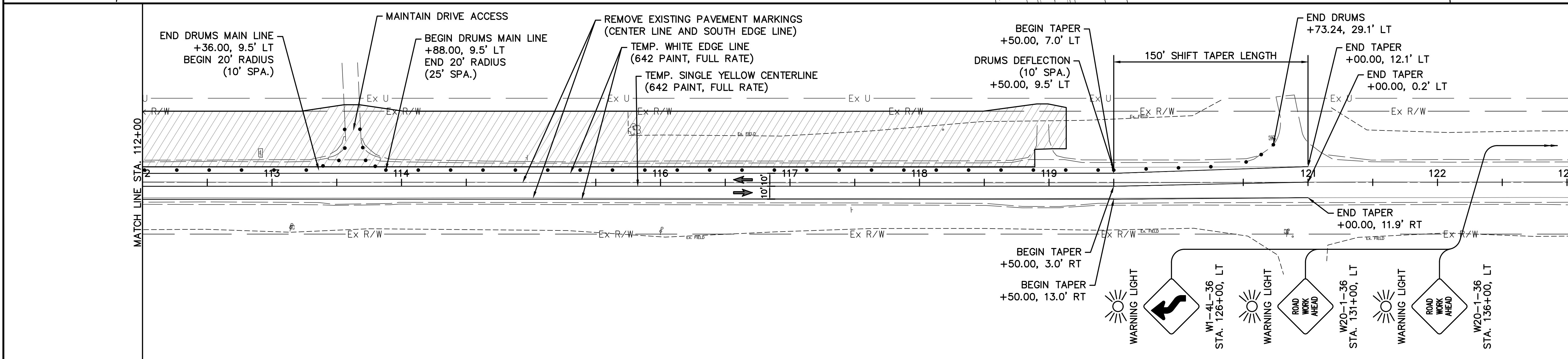
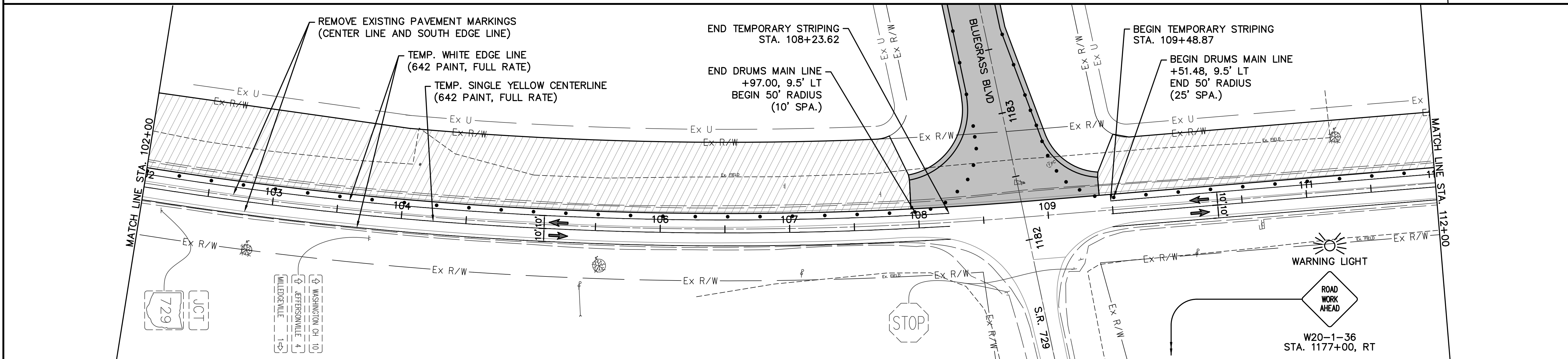
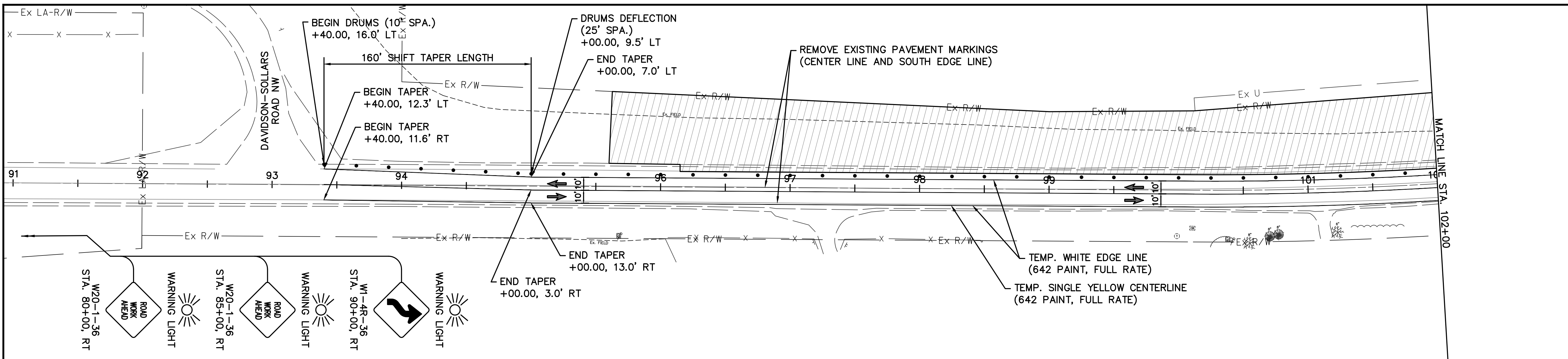
CALCULATED JLB CHECKED NNS


GENERAL NOTES (MAINTENANCE OF TRAFFIC)

APPROVED FOR CONSTRUCTION 7-02-2020

BLUEGRASS BLVD. PHASE 1

7
77




 0 10 20 40
 SCALE IN FEET
 CALCULATED JLB
 CHECKED NNS

MAINTENANCE OF TRAFFIC - PHASE 1

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

8
77

WATER MAIN HYDROSTATIC TESTING NOTES

A. AFTER THE PIPE HAS BEEN LAID AND BACKFILLED, ALL NEWLY LAID PIPE OR VALVED SECTION SHALL BE SUBJECTED TO HYDROSTATIC PRESSURE AND LEAKAGE TEST. ALL WATER MAINS MUST BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH AWWA C-605. THE TESTS MUST BE PERFORMED IN THE PRESENCE OF A REPRESENTATIVE OF FAYETTE COUNTY.

THE MINIMUM LEAKAGE TEST PRESSURE FOR ALL WATER MAIN SHALL BE 150 PSI, OR 1.5 TIMES THE ANTICIPATED AVERAGE STATIC PRESSURE, WHICHEVER IS GREATER. THE MINIMUM TEST PRESSURE SHALL BE HELD FOR A MINIMUM OF TWO (2) HOURS FOR ALL WATER MAIN. HYDROSTATIC PRESSURE SHALL BE APPLIED BY MEANS OF A PUMP TAKING WATER FROM AN AUXILIARY SUPPLY. ALL PIPING MUST BE PROPERLY FILLED AND FLUSHED TO DISPEL ALL AIR BEFORE THE TEST IS MADE USING POTABLE WATER.

B. HYDROSTATIC TESTING MUST BE PERFORMED ON ALL NEW WATER MAIN, WITH THE EXCEPTION OF CONNECTION POINTS, AS APPROVED BY FAYETTE COUNTY.

C. LEAKAGE IS DEFINED AS THE QUANTITY OF WATER TO BE SUPPLIED INTO THE NEWLY LAID PIPE, OR ANY VALVED SECTION THEREOF, NECESSARY TO MAINTAIN THE SPECIFIED LEAKAGE TEST PRESSURE AFTER THE PIPE HAS BEEN FILLED WITH WATER AND THE AIR EXPELLED.

D. NO PIPE INSTALLATION WILL BE ACCEPTED IF THE LEAKAGE EXCEEDS THE LEAKAGE DETERMINED BY THE CHART BELOW:

Where: L = length of pipe tested, in ft. $Q = \frac{L * D * \sqrt{P}}{148,000}$
 D = pipe diameter, in inches
 P = average test pressure
 Q = allowable leakage per hour

During the hydrostatic test, a thorough examination of all piping, fittings, valves, hydrants, etc. shall be performed. Leaking joints shall be tightened and cracked or otherwise defective material shall be removed and replaced and the test shall be repeated until satisfactory results are obtained.

Below is a table which represents the allowable leakage in gallons per hour.

ALLOWABLE LEAKAGE PER 1000FT. OF PIPELINE (GALLONS PER HOUR)

AVG. TEST PRESSURE (PSI) BAR	NOMINAL PIPE DIAMETER- INCHES							
	3	4	6	8	10	12	14	16
450(31)	0.43	0.57	0.86	1.15	1.43	1.72	2.01	2.29
400(28)	0.41	0.54	0.81	1.08	1.35	1.62	1.89	2.16
350(24)	0.38	0.51	0.76	1.01	1.26	1.52	1.77	2.02
300(21)	0.35	0.47	0.70	0.94	1.17	1.40	1.64	1.87
275(19)	0.34	0.45	0.67	0.90	1.12	1.34	1.57	1.79
250(17)	0.32	0.43	0.64	0.85	1.07	1.28	1.50	1.71
225(16)	0.30	0.41	0.61	0.81	1.01	1.22	1.42	1.62
200(14)	0.29	0.38	0.57	0.76	0.96	1.15	1.34	1.53
175(12)	0.27	0.36	0.54	0.72	0.89	1.07	1.25	1.43
150(10)	0.25	0.33	0.50	0.66	0.83	0.99	1.16	1.32

WATER MAIN DISINFECTION NOTES

A. DISINFECTION OR STERILIZATION OF NEW MAINS AND SERVICES, AS REQUIRED BY THE OSPA, SHALL BE COORDINATED THROUGH THE COUNTY SANITARY ENGINEER'S REPRESENTATIVE. THE VILLAGE'S REPRESENTATIVE RESERVES THE RIGHT TO REQUIRE STRICTER CHLORINE RESIDUAL REQUIREMENTS ON A CASE-BY-CASE BASIS.

C. MAINTAIN PIPES FREE OF DIRT AND FOREIGN MATTER DURING CONSTRUCTION BY DEWATERING TRENCH AND SEALING OPEN PIPE BARRELS. SWAB EACH LENGTH OF PIPE AS IT IS INSTALLED.

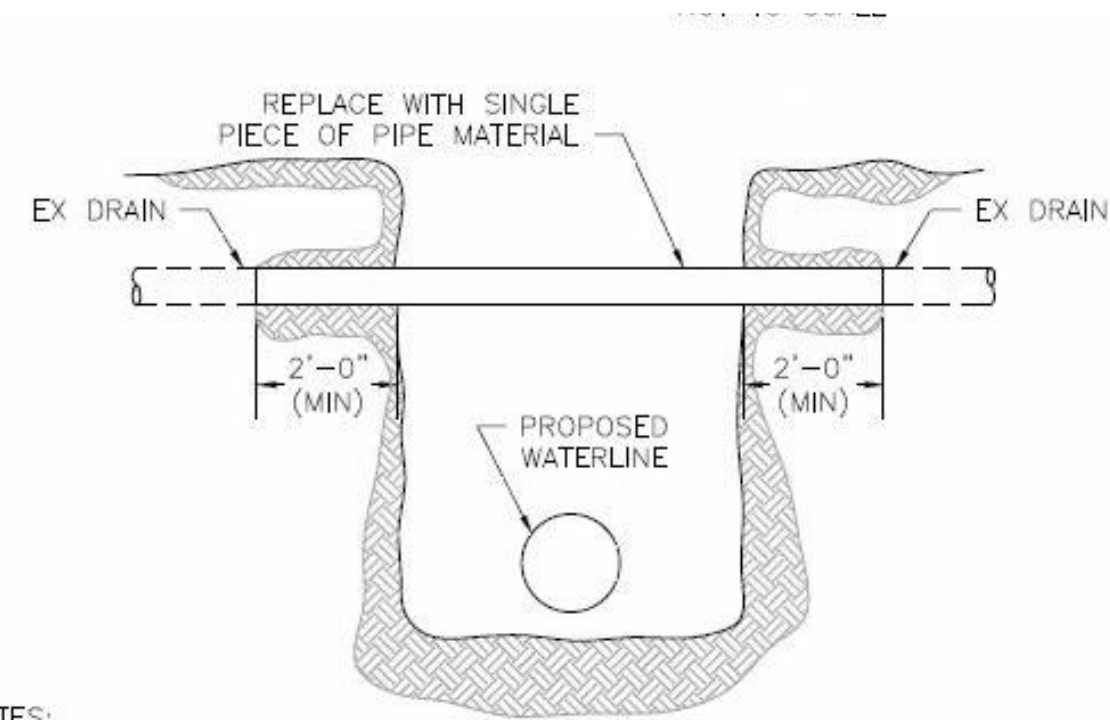
D. DISINFECTION TESTING SHALL BE PERFORMED PRIOR TO HYDROSTATIC TESTING. DISINFECTION SHALL BE COMPLETED IN ACCORDANCE WITH AWWA C-651. SAMPLE WATER AT EACH HYDRANT OR IF NO HYDRANT IS AVAILABLE, A SAMPLE TAP SHALL BE INSTALLED BY CONTRACTOR EVERY 1200 FT. ANALYZE SAMPLE USING ORTHOTOLIDINE REAGENT TO VERIFY FREE CHLORINE CONCENTRATION. MAINTAIN CONCENTRATION IN MAIN FOR 24 HOURS. SAMPLE HYDRANTS AT COMPLETION OF STERILIZATION VERIFYING MINIMUM CHLORINE RESIDUAL OF 20 MG PER LITER.

E. CONTRACTOR SHALL ACCOMMODATE FLUSHING AND SAMPLE LOCATIONS WITH FAYETTE COUNTY.

F. THE CONTRACTOR SHALL DISINFECT ALL WATER MAIN AND WATER SERVICE LINES IN ACCORDANCE WITH AWWA C-651, LATEST REVISION. THE DISINFECTION MAY BE PERFORMED BY USING EITHER THE CONTINUOUS FEED METHOD OR THE TABLET METHOD.

G. THE PROCEDURES FOR DISINFECTION SHALL BE IN ACCORDANCE WITH AWWA C-651. THE VILLAGE SHALL APPROVE OF THE METHOD AND PROCEDURES USED.

H. PERFORM BACTERIOLOGICAL TESTING, PER AWWA C-651, FOLLOWING HYDROSTATIC TESTING. SAMPLE THE MAIN FROM HYDRANTS OR TEST TAP IN THE PROPOSED LINE. THE SAMPLE IS TO BE DELIVERED TO A STATE CERTIFIED LABORATORY. DELIVER COPIES OF THE LABORATORY REPORT TO THE VILLAGE IN THE EVENT OF DETECTION OF COLIFORM ORGANISM, REPEAT FLUSHINGS, STERILIZATION, AND SAMPLING OF MAINS UNTIL ACCEPTABLE TEST RESULTS ARE ACHIEVED ON TWO (2) CONSECUTIVE DAYS. THIS IS TO BE PERFORMED PRIOR TO TRANSFER OF SERVICES TO THE NEW MAIN.



NOTES:

- INSIDE DIAMETER OF REPLACEMENT PIPE SHALL BE EQUAL TO OR GREATER THAN INSIDE DIAMETER OF EXISTING PIPE.
- REPLACEMENT MATERIAL USED SHALL BE EQUAL TO OR BETTER THAN THE EXISTING MATERIAL AS DIRECTED BY THE ENGINEER OR HIS REPRESENTATIVE.
- PROVIDE RUBBER FLEXIBLE PIPE COUPLING WHERE EXISTING TILE OR UNDERDRAIN HAS WATERTIGHT JOINTS. PROVIDE 30# FELT OR CONCRETE MORTAR OVER THE UPPER HALF OF THE JOINT WHERE OPEN JOINTS ARE ENCOUNTERED.
- BACKFILL BETWEEN WATERLINE AND REPLACEMENT TILE OR UNDERDRAIN SHALL BE COMPACTED GRANULAR.
- MINIMUM ROAD AND CURB UNDERDRAIN REPLACEMENT MATERIAL SHALL BE:
 - PERFORATED CONCRETE: ODOT ITEM 706.06
 - CONCRETE DRAIN TILE: ODOT ITEM 706.07
 - VITRIFIED CLAY: ODOT ITEM 706.08
 - PERFORATED PVC: ODOT ITEM 707.41
 - POLYETHYLENE DRAINAGE TUBING (PERFORATED): ODOT ITEM 707.31
- MINIMUM DRAIN TILE REPLACEMENT MATERIAL SHALL BE:
 - PVC: ASTM-D 2241, SDR 26
 - DUCTILE IRON: AWWA C151, PC 350
 - STEEL PIPE: ASTM-A 139 GRADE B
 - CONCRETE: ODOT ITEM 706.02

DRAIN TILE AND UNDERDRAIN REPLACEMENT

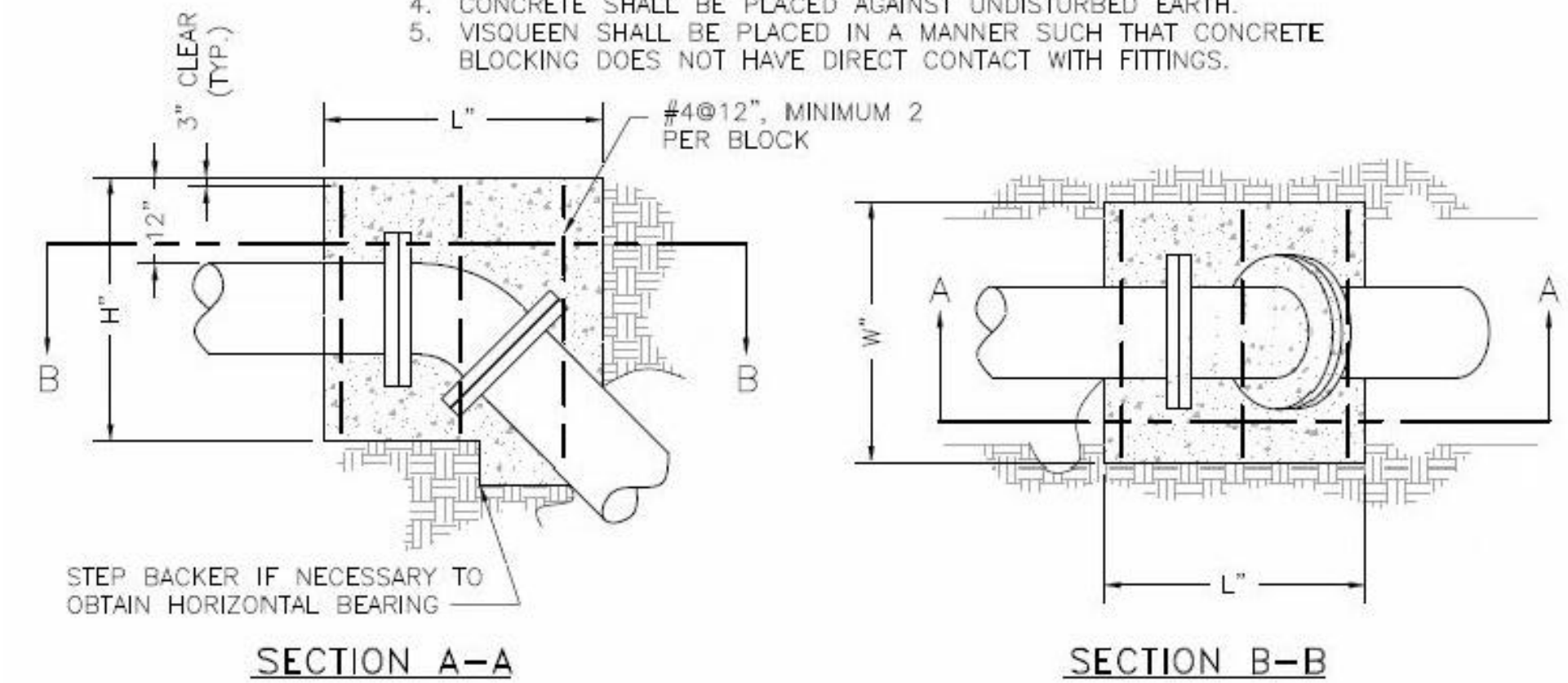
NOT TO SCALE

PIPE SIZE	DEGREE OF BEND															
	11 1/4'				22 1/2'				45'				90'			
	L	W	H	V	L	W	H	V	L	W	H	V	L	W	H	V
3"	12	18	12	1.5	13	25	16	3.0	18	30	19	5.9	25	30	24	10.4
4"	12	24	16	2.6	16	30	18	5.0	22	36	24	11.0	27	48	25	18.7
6"	12	48	18	6.0	15	43	36	13.4	30	55	24	22.9	37	54	36	41.6
8"	12	63	24	10.5	18	57	34	20.2	36	57	33	39.2	47	60	46	75.0
12"	20	54	36	22.6	37	62	37	49.0	48	62	51	87.9	66	66	66	166.4
16"	31	65	38	44.3	60	65	39	88.1	65	65	65	159.2	72	96	72	288.0
20"	45	70	40	72.8	56	70	60	136.2	72	76	78	247.0	86	108	84	451.8
24"	41	72	54	92.3	67	74	69	198.0	88	84	84	359.1	96	120	96	640.0

V = VOLUME OF CONCRETE IN CUBIC FEET

NOTES:

- CONCRETE FOR BACKING SHALL BE ODOT CLASS "QC1".
- BACKING SHALL BE DESIGNED FOR 3000 PSF SOIL BEARING.
- REINFORCING STEEL SHALL BE USED AS SHOWN.
- CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH.
- VISQUEEN SHALL BE PLACED IN A MANNER SUCH THAT CONCRETE BLOCKING DOES NOT HAVE DIRECT CONTACT WITH FITTINGS.

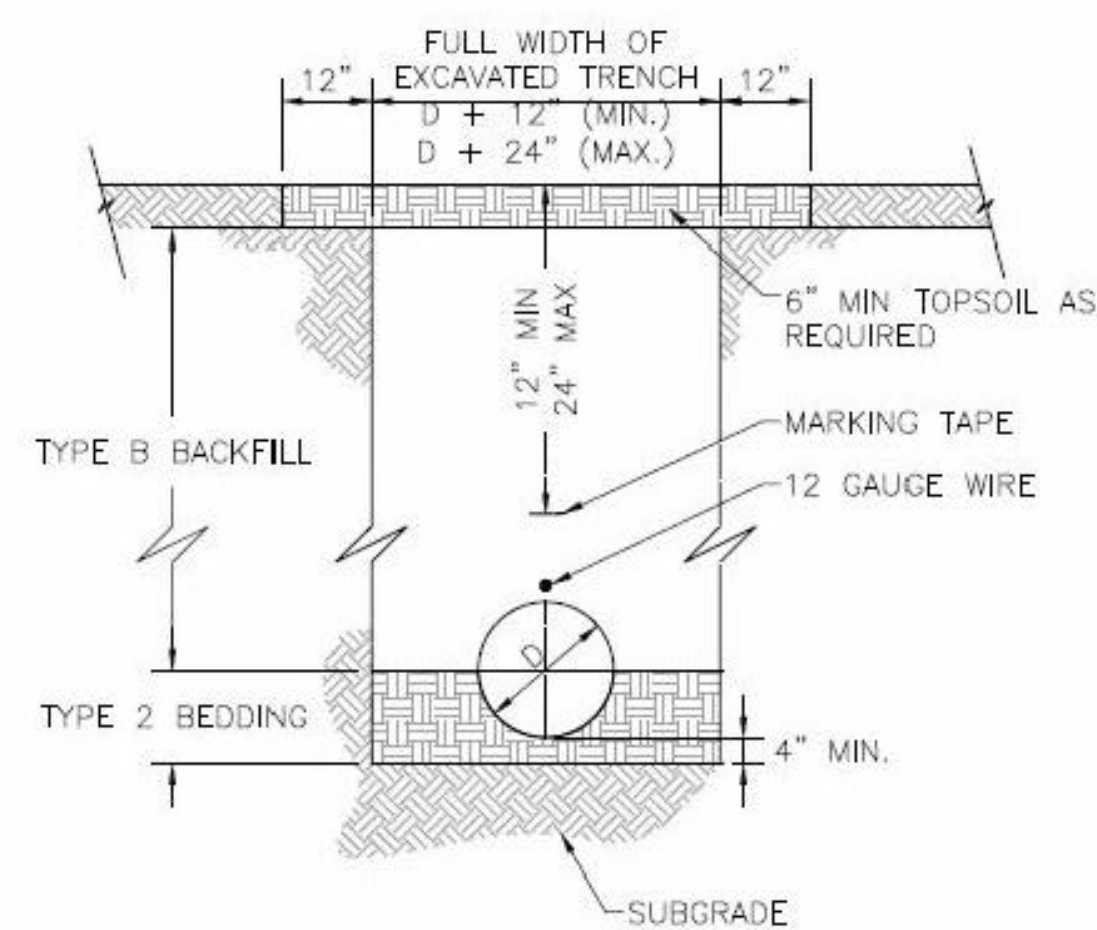


SECTION A-A

SECTION B-B

BACKING FOR VERTICAL BENDS

NOT TO SCALE



TRENCH DETAIL FOR WATERLINE INSTALLED IN NON-PAVED AREAS

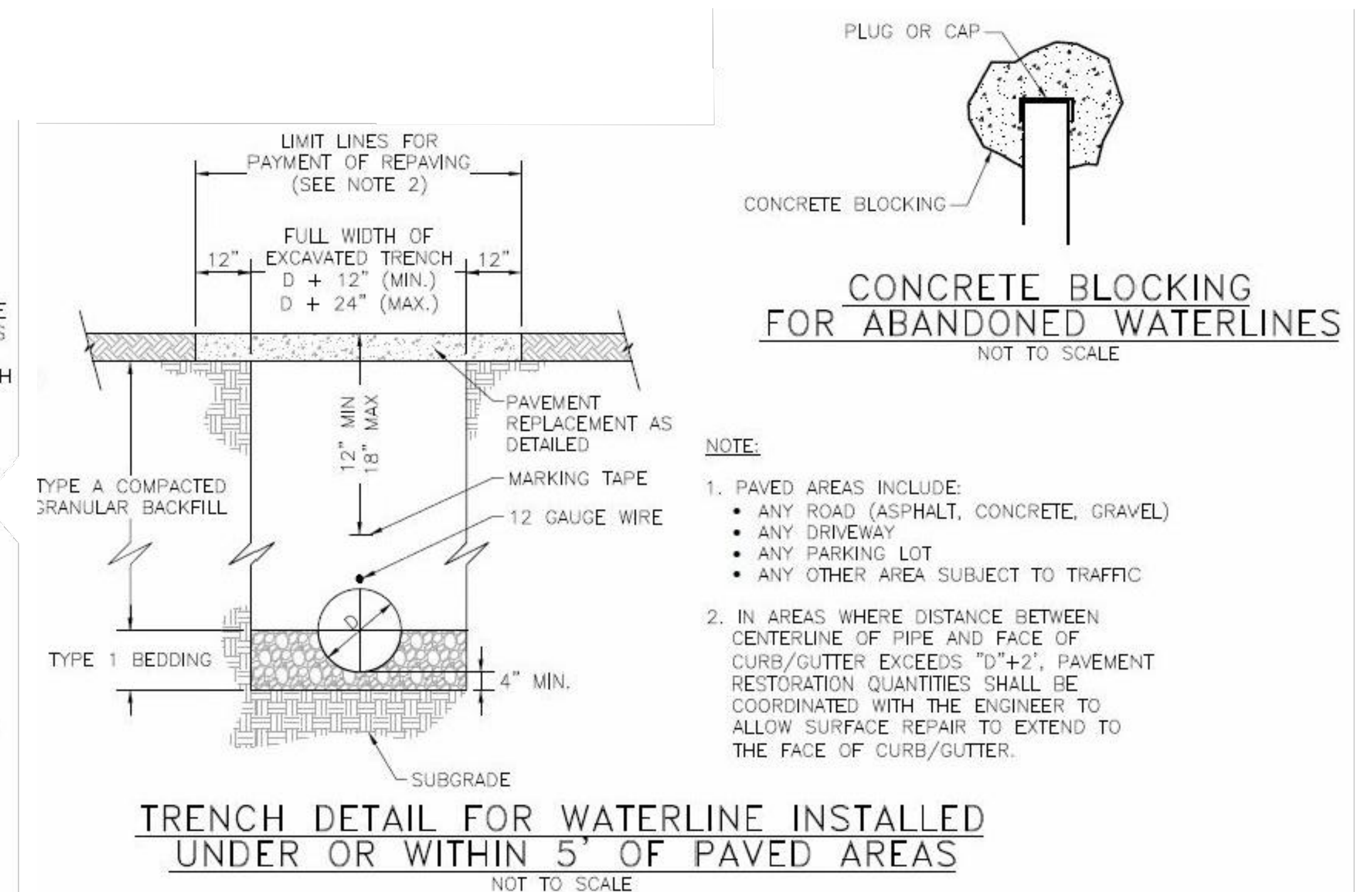
NOT TO SCALE

BACKFILL:

- TYPE A SHALL BE COMPACTED GRANULAR MATERIAL AS SPECIFIED IN ODOT CMS ITEM 304.
- TYPE B SHALL BE NATURAL SOIL FREE FROM STONES LARGER THAN 2 INCHES ACROSS THEIR GREATEST DIMENSION, TOPSOIL, VEGETATION, DEBRIS, RUBBISH OR FROZEN MATERIAL.
- TYPE C SHALL BE LOW STRENGTH MORTAR BACKFILL, TYPE 1 AS SPECIFIED IN ODOT CMS ITEM 613.

BEDDING:

- TYPE 1-GRANULAR MATERIAL No. 57,6,67,68 OR 7 PER ODOT CMS TABLE 703.01-1.
- TYPE 2-NATIVE SOIL FREE FROM STONES LARGER THAN 2 INCHES ACROSS THEIR GREATEST DIMENSIONS, TOP SOIL, VEGETATION, DEBRIS OR FROZEN MATERIAL.
- TYPE 3-CONCRETE BEDDING, CLASS QC1 CONCRETE PER ODOT CMS 499.

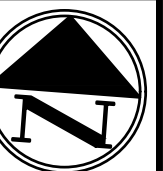


TRENCH DETAIL FOR WATERLINE INSTALLED UNDER OR WITHIN 5' OF PAVED AREAS

NOT TO SCALE

NOTE:

- PAVED AREAS INCLUDE:
 - ANY ROAD (ASPHALT, CONCRETE, GRAVEL)
 - ANY DRIVEWAY
 - ANY PARKING LOT
 - ANY OTHER AREA SUBJECT TO TRAFFIC
- IN AREAS WHERE DISTANCE BETWEEN CENTERLINE OF PIPE AND FACE OF CURB/GUTTER EXCEEDS "D"+2', PAVEMENT RESTORATION QUANTITIES SHALL BE COORDINATED WITH THE ENGINEER TO ALLOW SURFACE REPAIR TO EXTEND TO THE FACE OF CURB/GUTTER.



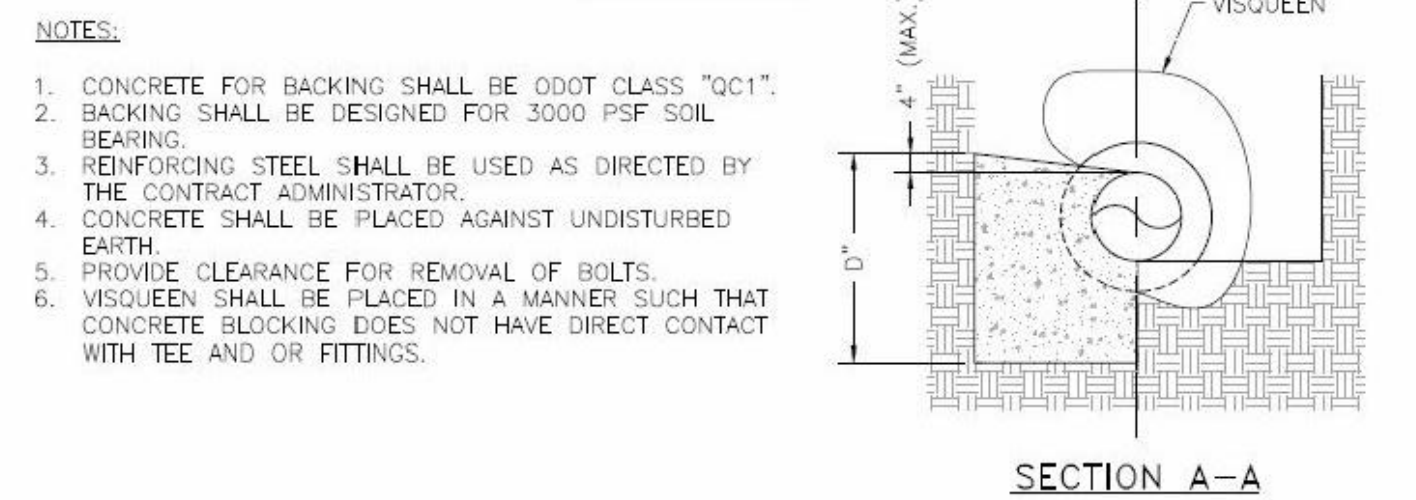
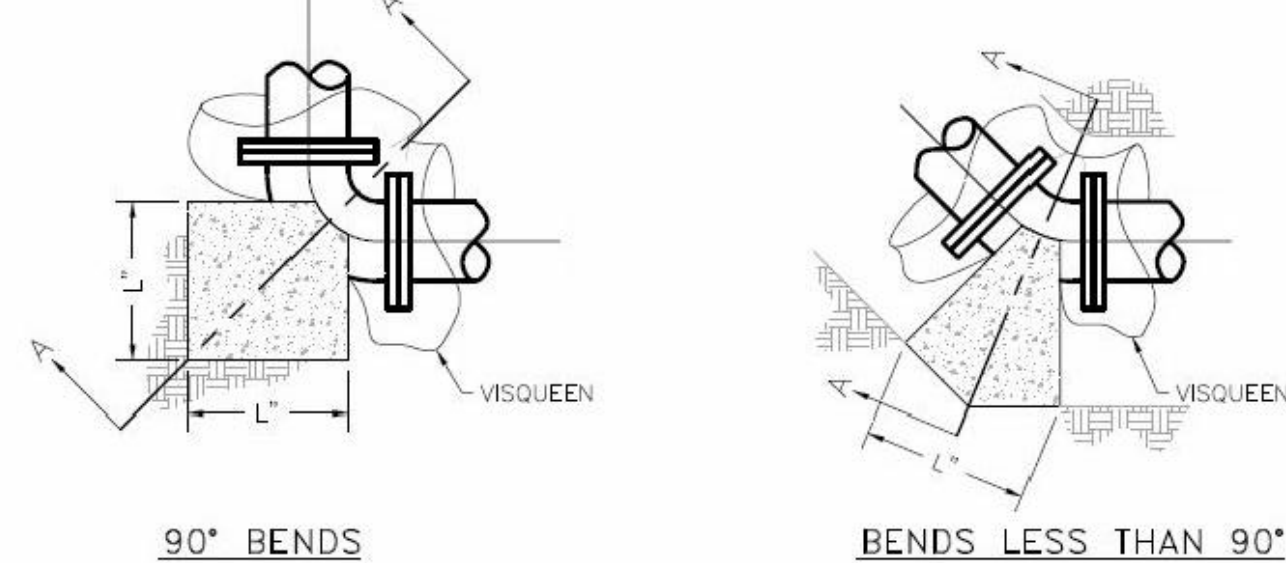
WATER WORKS DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

PIPE SIZE	DEGREE OF BEND															
	11 1/4°				22 1/2°				45°				90°			
	L	D	V	L	D	V	L	D	V	L	D	V	L	D	V	
3"	4	3	0.1	6	4	0.2	10	4	0.3	10	4	0.3				
4"	5	4	0.2	9	5	0.4	14	5	0.6	14	5	0.6				
6"	8	6	0.5	12	7	0.7	20	8	1.4	18	9	1.7				
8"	9	8	0.7	16	9	1.4	24	12	2.7	25	11	4.0				
12"	14	12	1.8	24	14	3.6	36	18	6.8	32	18	10.7				
16"	18	16	3.4	32	18	6.7	36	32	13.4	41	26	25.4				
20"	25	20	6.4	30	30	11.5	49	36	20.5	50	32	46.5				
24"	27	24	9.0	39	34	18.4	60	42	35.0	58	40	77.7				

V = VOLUME OF CONCRETE IN CUBIC FEET

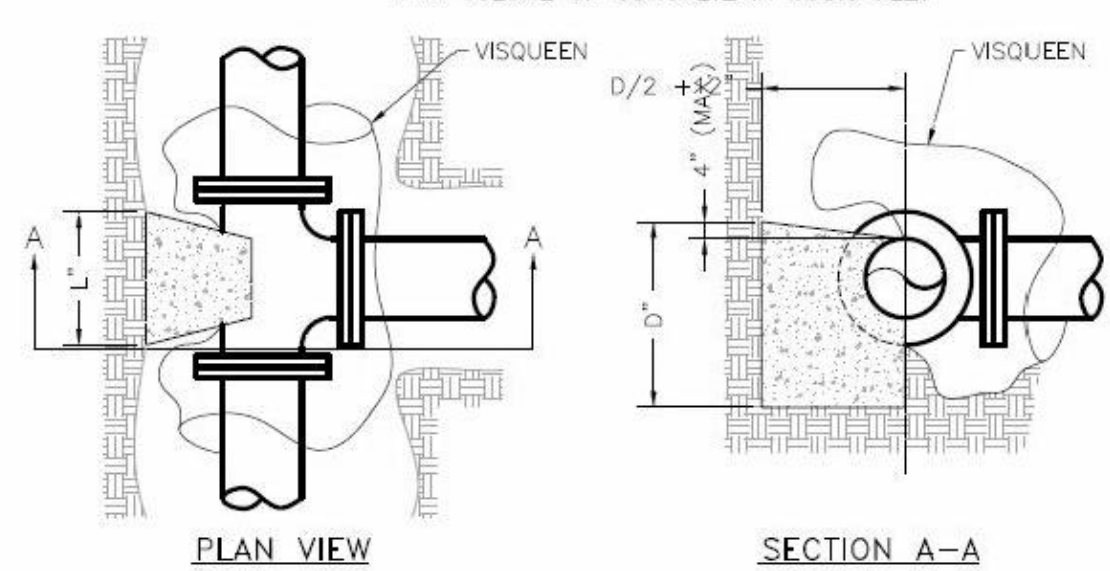


BACKING FOR BENDS
NOT TO SCALE

- NOTES:
1. CONCRETE FOR BACKING SHALL BE ODOT CLASS "QC1".
 2. BACKING SHALL BE DESIGNED FOR 3000 PSF SOIL BEARING.
 3. REINFORCING STEEL SHALL BE USED AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
 4. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH.
 5. PROVIDE CLEARANCE FOR REMOVAL OF BOLTS.
 6. VISQUEEN SHALL BE PLACED IN A MANNER SUCH THAT CONCRETE BLOCKING DOES NOT HAVE DIRECT CONTACT WITH TEE AND/OR FITTINGS.

RUN	BRANCH																											
	3"				4"				6"				12"				16"				20"				24"			
	L	D	V	L	D	V	L	D	V	L	D	V	L	D	V	L	D	V	L	D	V	L	D	V	L	D	V	
3"	12	5	0.5																									
4"	10	6	0.5	11	8	0.8																						
6"	9	7	0.5	11	8	0.8	18	12	1.9																			
8"	8	8	0.5	10	9	0.7	18	12	1.9	23	16	3.5																
12"	6	12	0.6	8	12	0.8	18	12	1.9	23	16	3.5	38	22	8.7													
16"	6	16	0.8	6	16	0.8	14	16	2.0	20	18	3.3	36	23	8.7	49	30	13.6										
20"	6	20	1.0	6	20	1.0	11	20	1.9	18	20	3.3	35	24	8.7	46	32	13.6	60	38	26.5							
24"	6	24	1.2	6	24	1.2	9	24	1.9	15	24	3.3	30	28	8.7	42	36	14.0	54	42	26.3	68	48	45.4				

V = VOLUME OF CONCRETE IN CUBIC FEET

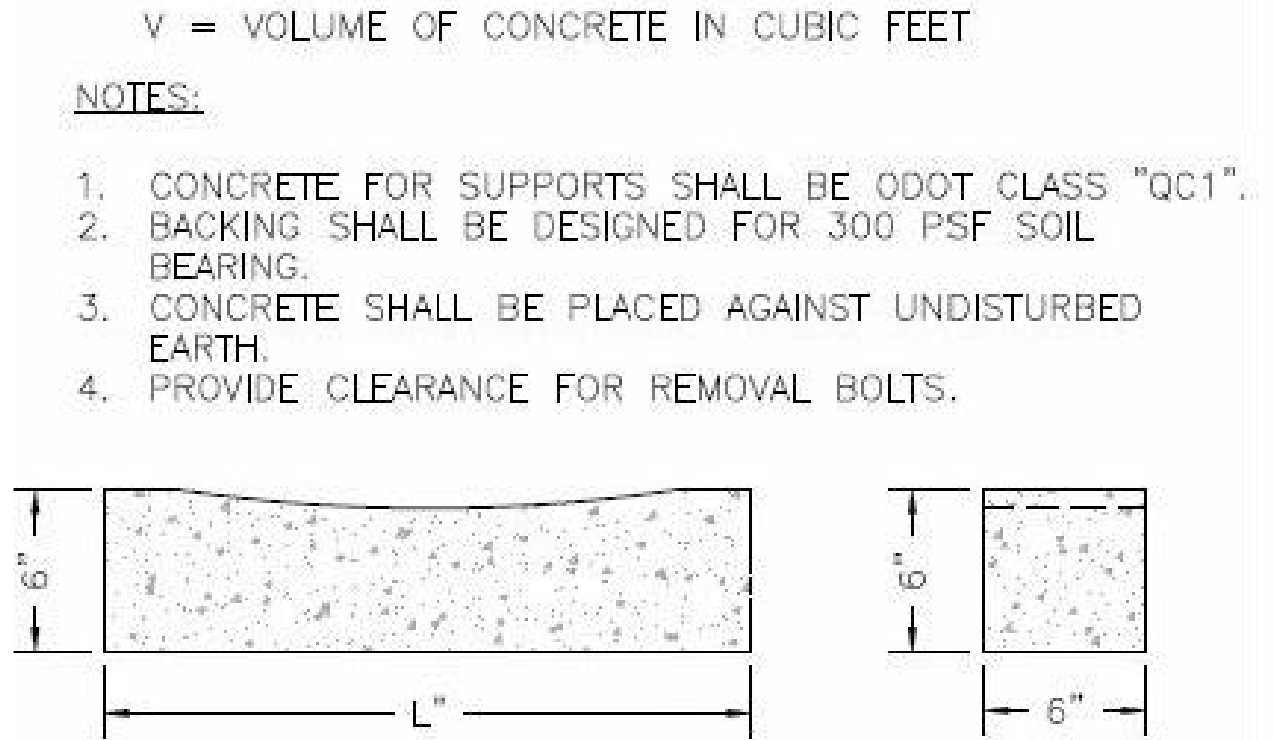


- NOTES:
1. CONCRETE FOR BACKING SHALL BE ODOT CLASS "QC1".
 2. BACKING SHALL BE DESIGNED FOR 3000 PSF SOIL BEARING.
 3. REINFORCING STEEL SHALL BE USED AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
 4. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH.
 5. PROVIDE CLEARANCE FOR REMOVAL OF BOLTS.
 6. VISQUEEN SHALL BE PLACED IN A MANNER SUCH THAT CONCRETE BLOCKING DOES NOT HAVE DIRECT CONTACT WITH TEE AND/OR FITTINGS.

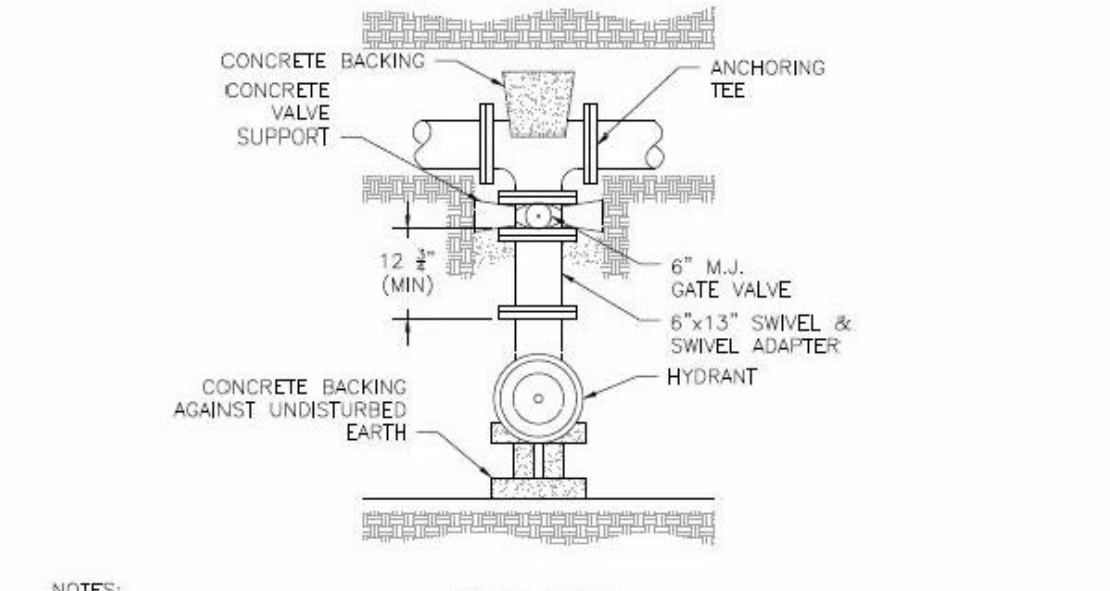
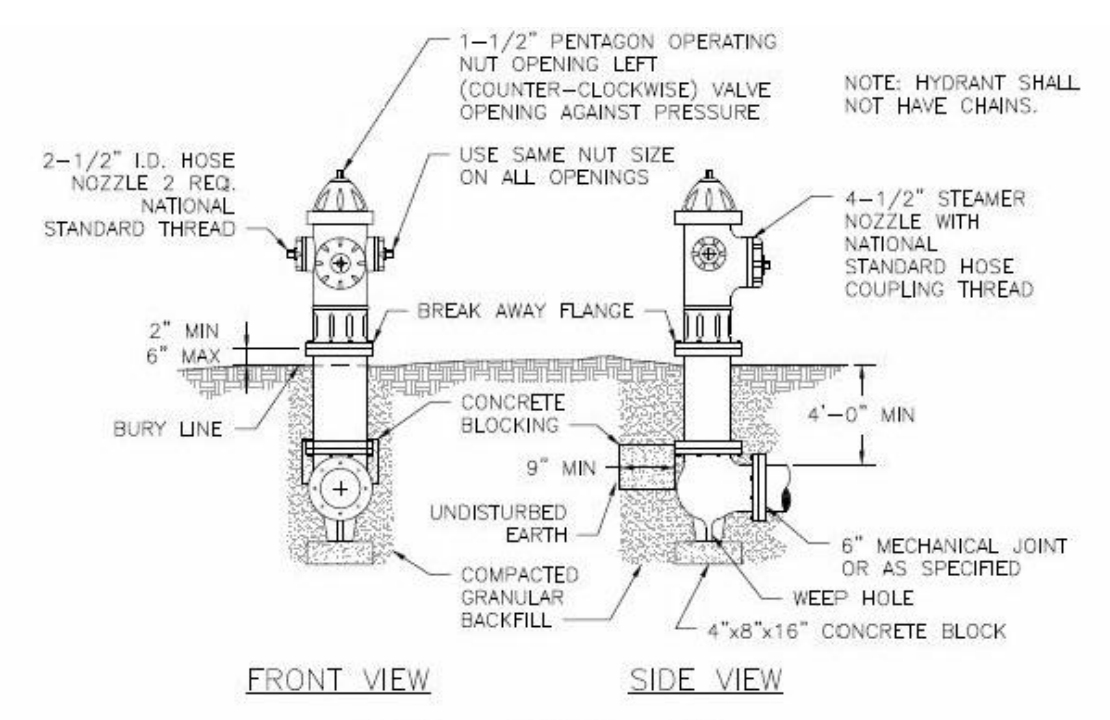
BACKING FOR TEES
NOT TO SCALE

	SIZE	L	V
GATE VALVES	3"	15	0.31
	4"	16	0.33
	6"	17	0.36
	8"	20	0.42
BUTTERFLY VALVES	12"	24	0.50
	14"	28	0.58
	16"	30	0.63
	20"	36	0.75
	24"	42	0.88
	30"	48	1.00

V = VOLUME OF CONCRETE IN CUBIC FEET

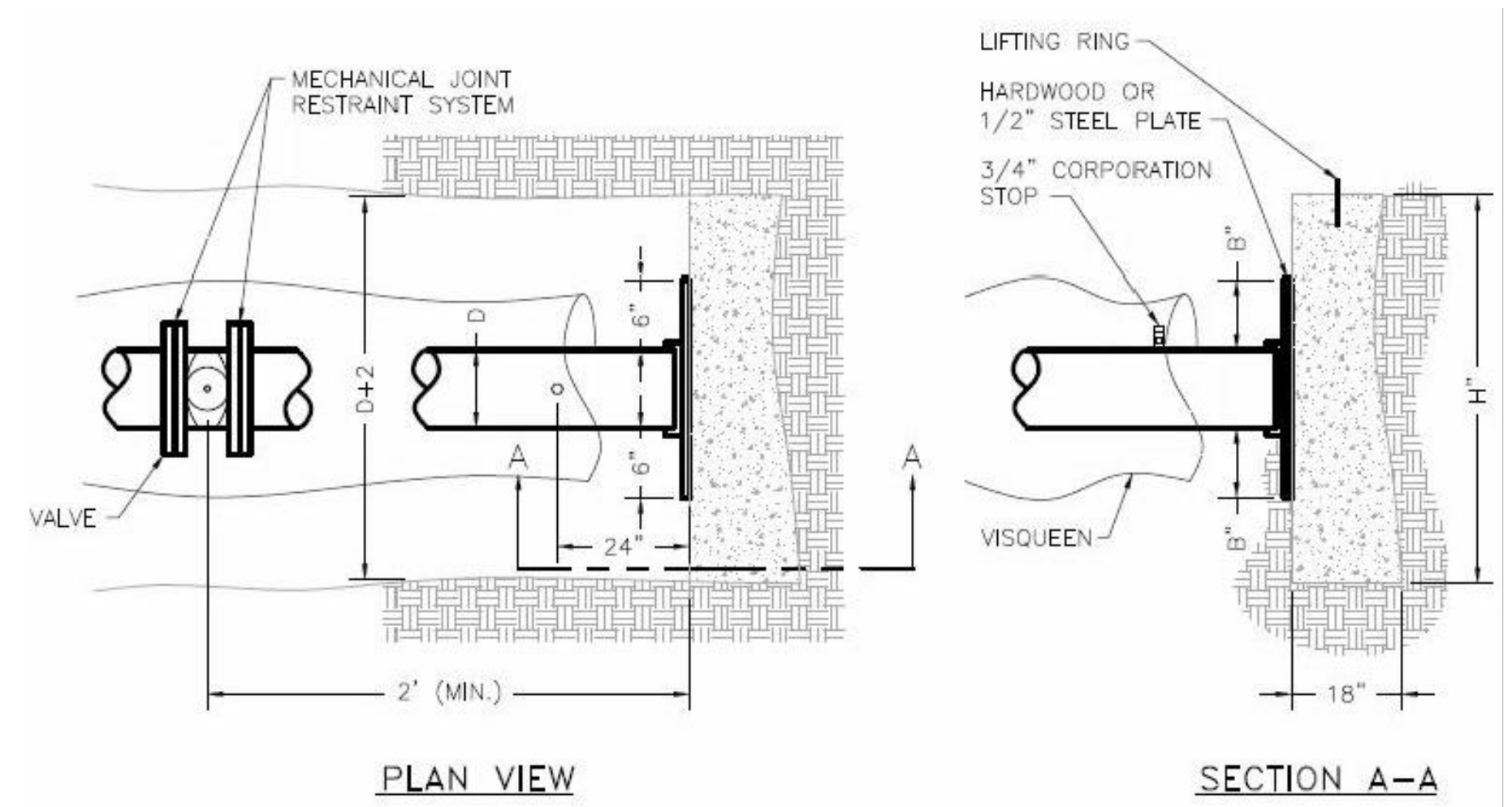


- NOTES:
1. CONCRETE FOR SUPPORTS SHALL BE ODOT CLASS "QC1".
 2. BACKING SHALL BE DESIGNED FOR 300 PSF SOIL BEARING.
 3. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH.
 4. PROVIDE CLEARANCE FOR REMOVAL BOLTS.



- NOTES:
1. BACKFILL SHALL BE GRANULAR MATERIAL CONFORMING TO ODOT #57 STONE, ITEM 703.11 TYPE 2, GRADE A, OR APPROVED SUITABLE EXCAVATED MATERIAL POWER TAMPED IN LAYERS NOT EXCEEDING 4" IN THICKNESS, LOOSE MEASUREMENT. BACKFILL SHALL EXTEND FROM THE BOTTOM OF THE PIT OR TRENCH TO 6" BELOW THE EXISTING OR PROPOSED SURFACE. COST OF FURNISHING AND PLACING BACKFILL SHALL BE INCLUDED IN THE PRICE BID FOR EACH HYDRANT.
 2. ALL HYDRANTS SHALL BE INSTALLED WITH HARDWOOD OR CONCRETE BLOCKING AGAINST UNDISTURBED EARTH.
 3. DRAIN ROCK AROUND AND ABOVE HYDRANT SHALL BE 2" OR LARGER. CLOTH FILTER MATERIAL SHALL BE PLACED BETWEEN DRAIN AND FILL.

TYPICAL 6" HYDRANT SETTING-TYPE "A"
NOT TO SCALE

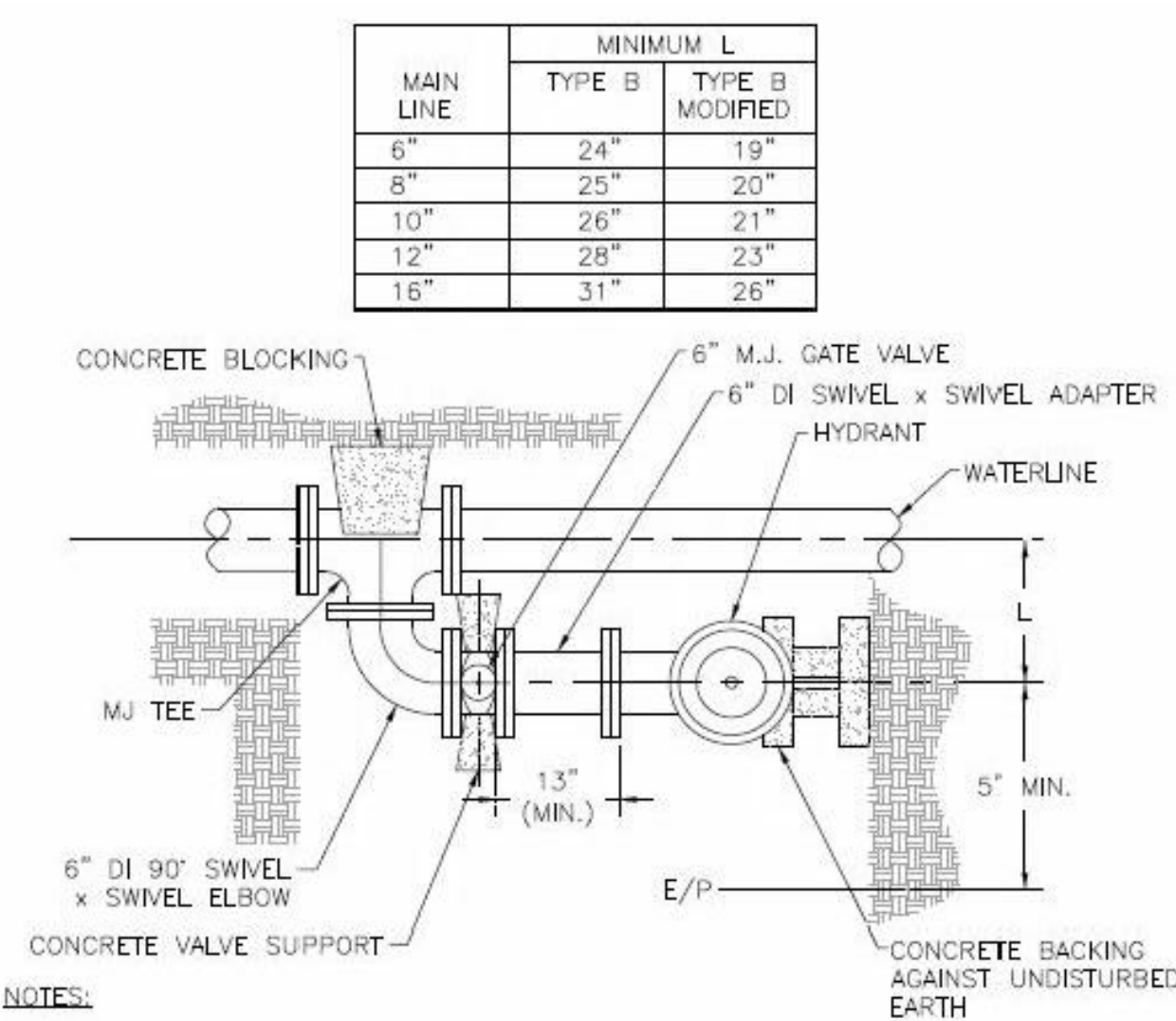


- NOTES:
1. CONCRETE FOR BACKING SHALL BE ODOT CLASS "QC1".
 2. BACKING SHALL BE DESIGNED FOR 3000 PSF SOIL BEARING.
 3. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH.
 4. PROVIDE CLEARANCE FOR REMOVAL OF BOLTS.
 5. VISQUEEN SHALL BE PLACED IN A MANNER SUCH THAT CONCRETE BLOCKING DOES NOT HAVE DIRECT CONTACT WITH TEE AND/OR FITTINGS.
 6. END OF PIPE SHALL BE CAPPED OR PLUGGED.
 7. STEEL PLATE SHALL BE GREASED WHERE IN CONTACT WITH CONCRETE BACKING.
 8. PLUG POLES SHALL BE INSTALLED AT ALL END-OF-LINE STUBS AT THE THRUST BLOCK.

SIZE OF PIPE	H	B	L (PVC)	L (DIP)	V
6"	8	1	20	18	2.52
8"	12	1	20	18	4.00
12"	23	3	20	18	8.64
16"	37	3	20	18	15.39

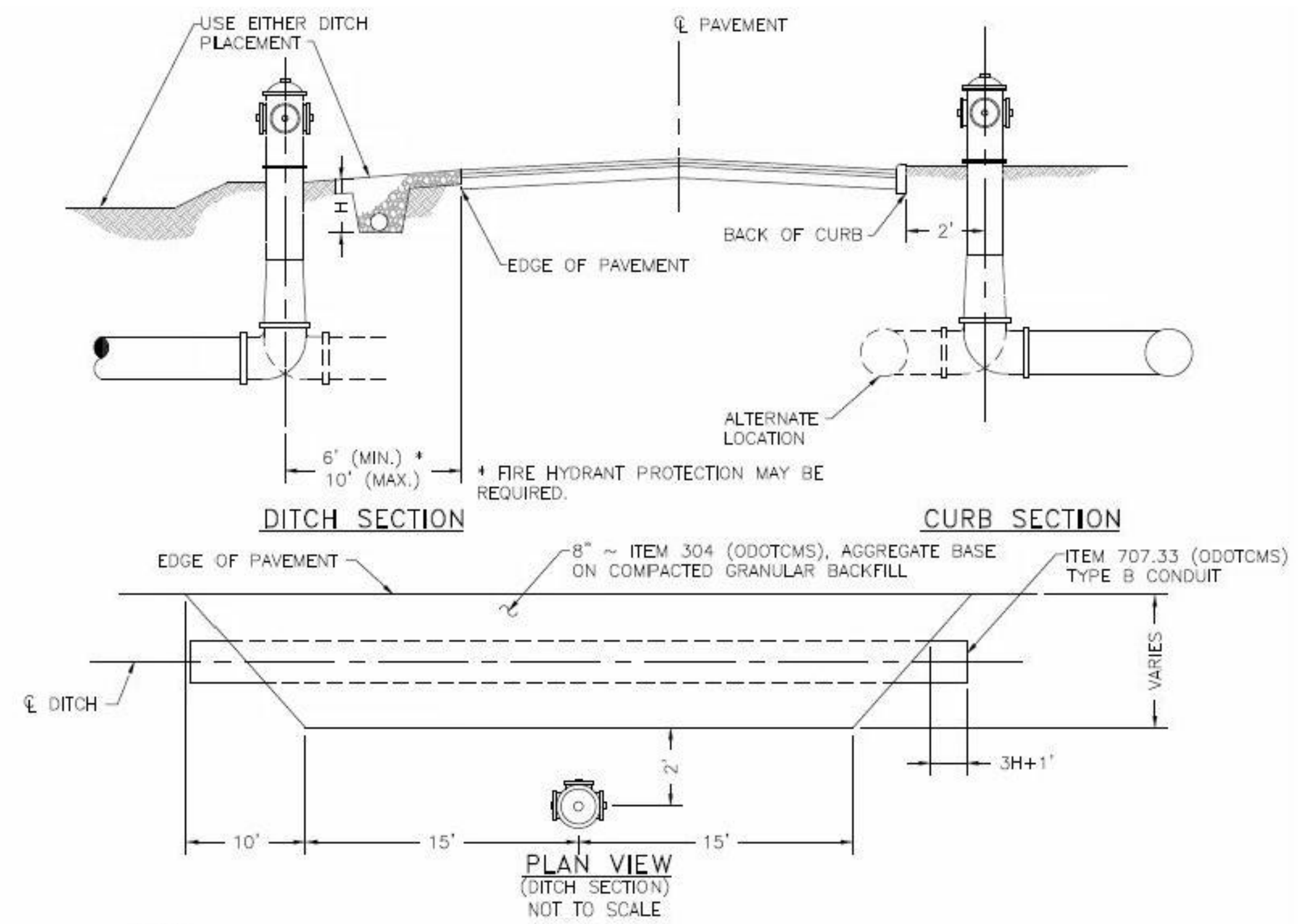
V = VOLUME OF CONCRETE IN CUBIC FEET.

THRUST BLOCK
NOT TO SCALE



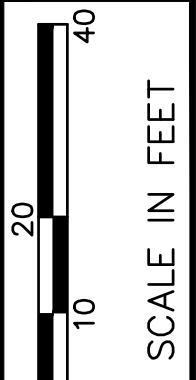
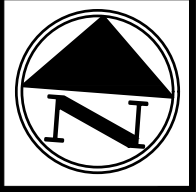
- NOTES:
1. TYPE B: LONG SIDE OF BEND TO TEE. TYPE B MODIFIED: SHORT SIDE OF BEND TO TEE.
 2. HYDRANTS SHALL HAVE A MAXIMUM BURY OF 7"-0". MODIFICATION OF THE HYDRANT LEAD TO MEET THIS REQUIREMENT SHALL BE IN THE SECTION FROM THE VALVE TO THE HYDRANT.
 3. BACKFILL SHALL BE GRANULAR MATERIAL CONFORMING TO ODOT #57 STONE, ITEM 703.11 TYPE 2, GRADE A, OR APPROVED SUITABLE EXCAVATED MATERIAL POWER TAMPED IN LAYERS NOT EXCEEDING 4" IN THICKNESS, LOOSE MEASUREMENT. BACKFILL SHALL EXTEND FROM THE BOTTOM OF THE PIT OR TRENCH TO 6" BELOW THE EXISTING OR PROPOSED SURFACE. COST OF FURNISHING AND PLACING BACKFILL SHALL BE INCLUDED IN THE PRICE BID FOR EACH HYDRANT.
 4. ALL HYDRANTS SHALL BE INSTALLED WITH HARDWOOD OR CONCRETE BLOCKING AGAINST UNDISTURBED EARTH.
 5. DRAIN ROCK AROUND AND ABOVE HYDRANT SHALL BE 2" OR LARGER. CLOTH FILTER MATERIAL SHALL BE PLACED BETWEEN DRAIN AND FILL.
 6. TYPE B OR TYPE B MODIFIED SETTING SHALL ONLY BE UTILIZED WHEN TYPICAL 6" HYDRANT SETTING IS NOT APPLICABLE.
 7. REFER TO TYPICAL 6" HYDRANT SETTING TYPE A DETAIL FOR ELEVATION AT HYDRANT.

TYPICAL 6" HYDRANT SETTING-TYPE "B"
NOT TO SCALE



- NOTES:
1. THIS DETAIL IS TO BE USED IN CONJUNCTION WITH THE TYPE "A", TYPE A MODIFIED, AND TYPE B HYDRANT SETTING DETAILS.
 2. NO FIRE HYDRANT SHALL BE LOCATED WITHIN SIX (6) FEET OF THE EDGE OF ANY RESIDENTIAL DRIVE APPROACH NOR SHALL ANY HYDRANT BE LOCATED WITHIN EIGHT (8) FEET OF ANY ALLEY, COMMERCIAL DRIVE, OR ACCESS ROAD.

FIRE HYDRANT LOCATION DETAIL
NOT TO SCALE

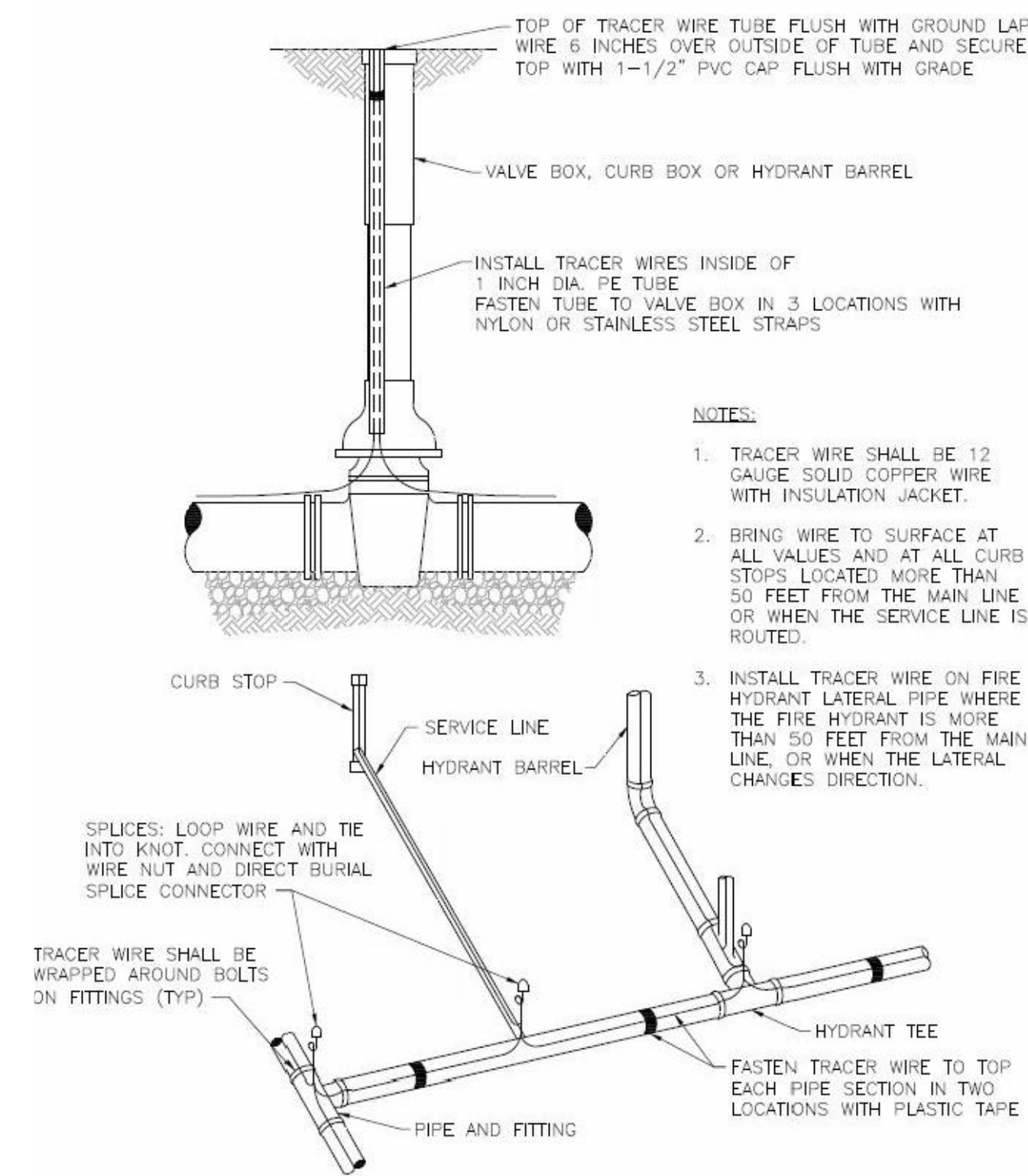


CALCULATED
JLB
CHECKED
NNS

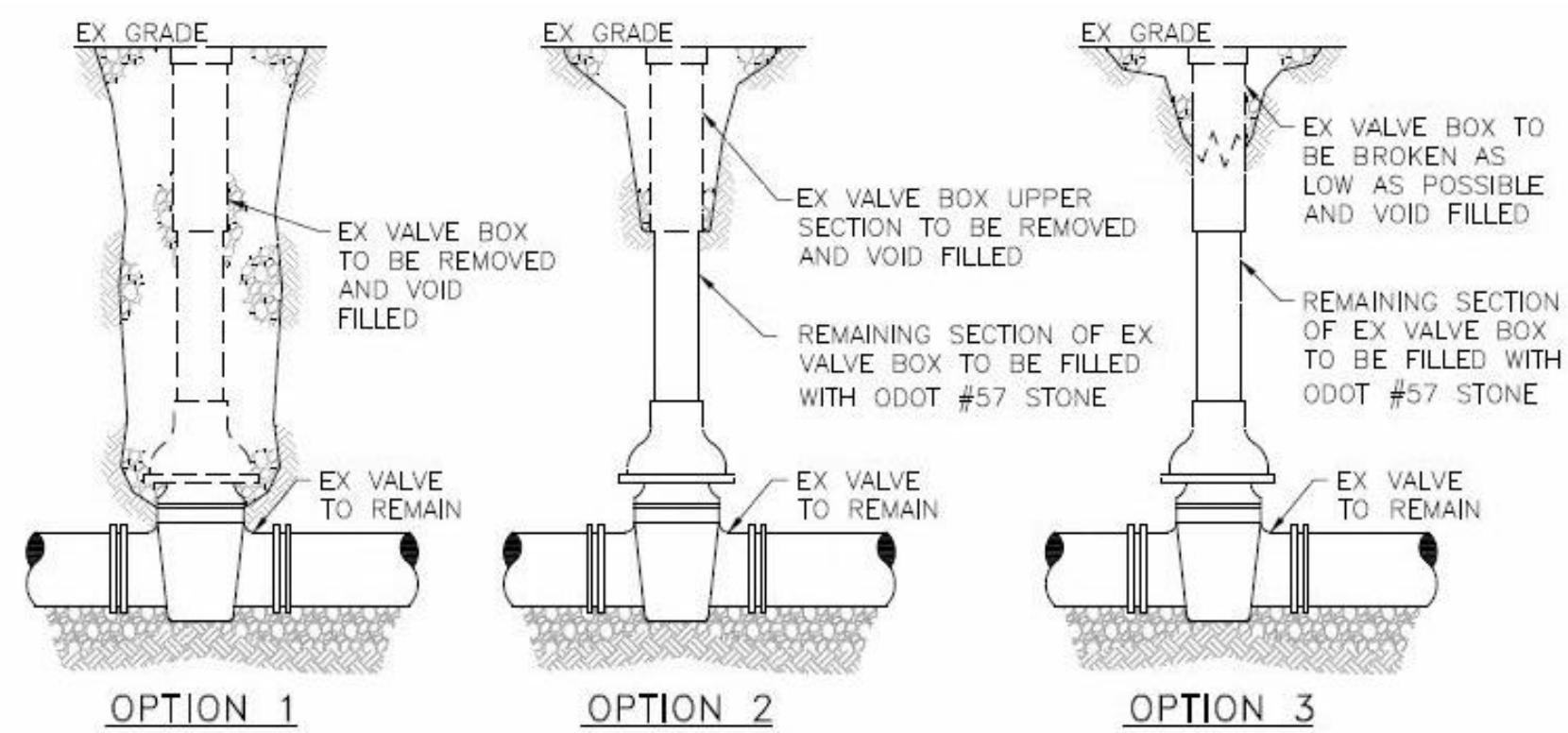
WATER WORKS DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

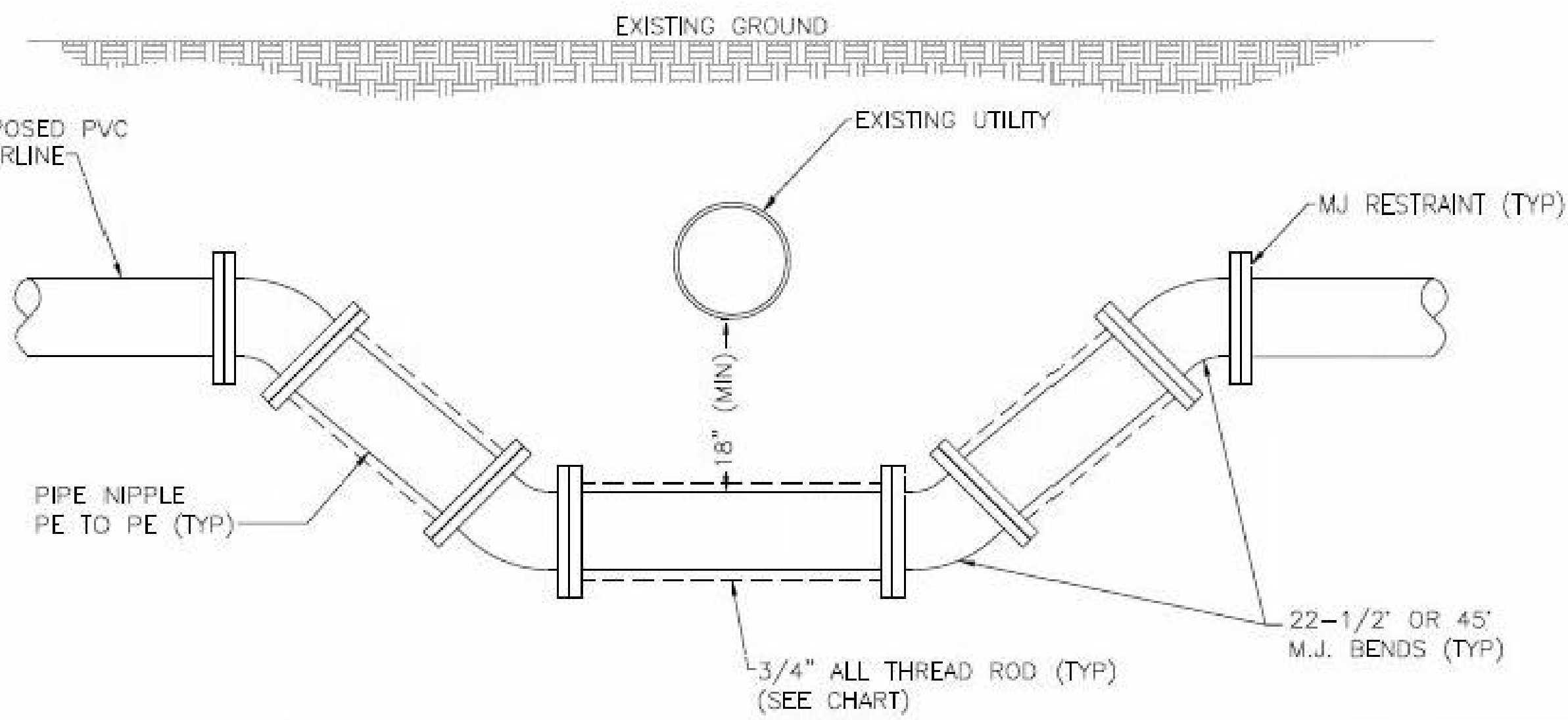


TRACER WIRE DETAIL
NOT TO SCALE



ABANDONMENT OF EXISTING VALVE
NOT TO SCALE

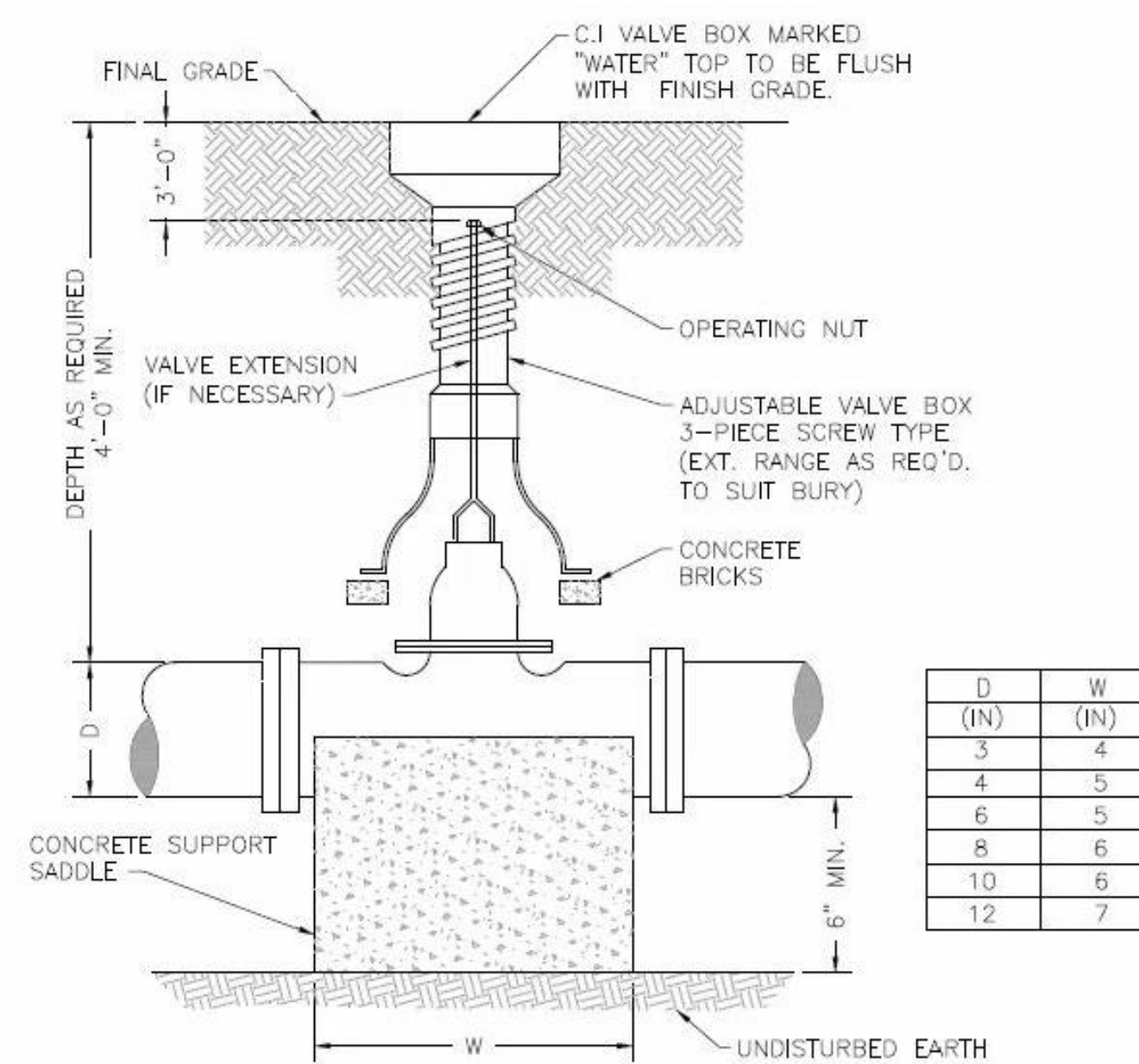
- NOTES:**
- EXISTING VALVES TO BE ABANDONED IN PLACE AND SHALL BE LEFT IN THE "CLOSED" OR "OPEN" POSITION AS DESIGNATED BY THE OWNER OR AS OUTLINED IN THE DRAWINGS. PRIOR TO REMOVAL OF THE VALVE BOX THE VALVE SHALL BE ACTUATED TO A FULLY OPEN OR FULLY CLOSED POSITION AND THE POSITION VERIFIED BY THE OWNER OR THE OWNER'S REPRESENTATIVE BEFORE FURTHER ACTION IS TAKEN.
 - FOLLOWING VERIFICATION OF VALVE POSITION THE VALVE BOX SHALL BE REMOVED UTILIZING ONE OF THE THREE OPTIONS SHOWN. OPTION 1 IS THE PREFERRED ALTERNATIVE FOR REMOVAL OF THE VALVE BOX, HOWEVER, WHERE THE VALVE IS LOCATED IN AN AREA OF PAVEMENT THAT IS NOT TO BE DISTURBED OR ACCESS FOR EXCAVATION OF THE VALVE BOX AREA IS LIMITED, OPTION 2 OR OPTION 3 MAY BE APPLIED AS AN ALTERNATE. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND/OR THE OWNER'S REPRESENTATIVE ON THE OPTION TO BE UTILIZED PRIOR TO INITIATING THE WORK.
 - ONCE THE VALVE BOX HAS BEEN REMOVED, THE REMAINING VOID IS TO BE FILLED WITH COMPACTED GRANULAR MATERIAL AND THE SURFACE RESTORED TO MATCH ADJACENT IN ACCORDANCE WITH DRAWINGS.
 - WHERE EXISTING VALVE BOX IS LOCATED IN PAVEMENT THE PAVEMENT SURFACE REMOVED FOR ACCESS TO THE VALVE SHALL BE SAW CUT.



TYPICAL WATERLINE GRADE ADJUSTMENT
NOT TO SCALE

- NOTES:**
- WHERE EXISTING UTILITY GRADE CONFLICTS WITH GRADE OF PROPOSED WATERLINE, PROPOSED WATERLINE SHALL BE ADJUSTED IN GRADE TO PROVIDE A MINIMUM SEPARATION DISTANCE OF 18" BETWEEN UTILITIES.
 - ALL JOINTS INVOLVED IN GRADE ADJUSTMENT SHALL INCORPORATE MECHANICAL JOINTS AND SHALL BE RESTRAINED.

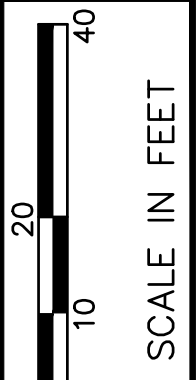
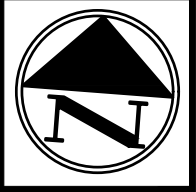
PIPE DIAMETER	NO OF RODS
4" & 6"	2
8"	3
10" & UP	4



STANDARD VALVE BOX
NOT TO SCALE

- NOTES:**
- VISQUEEN SHALL BE PLACED IN A MANNER SUCH THAT CONCRETE BLOCKING DOES NOT HAVE DIRECT CONTACT WITH VALVE.

D (IN)	W (IN)
3	4
4	5
6	5
8	6
10	6
12	7

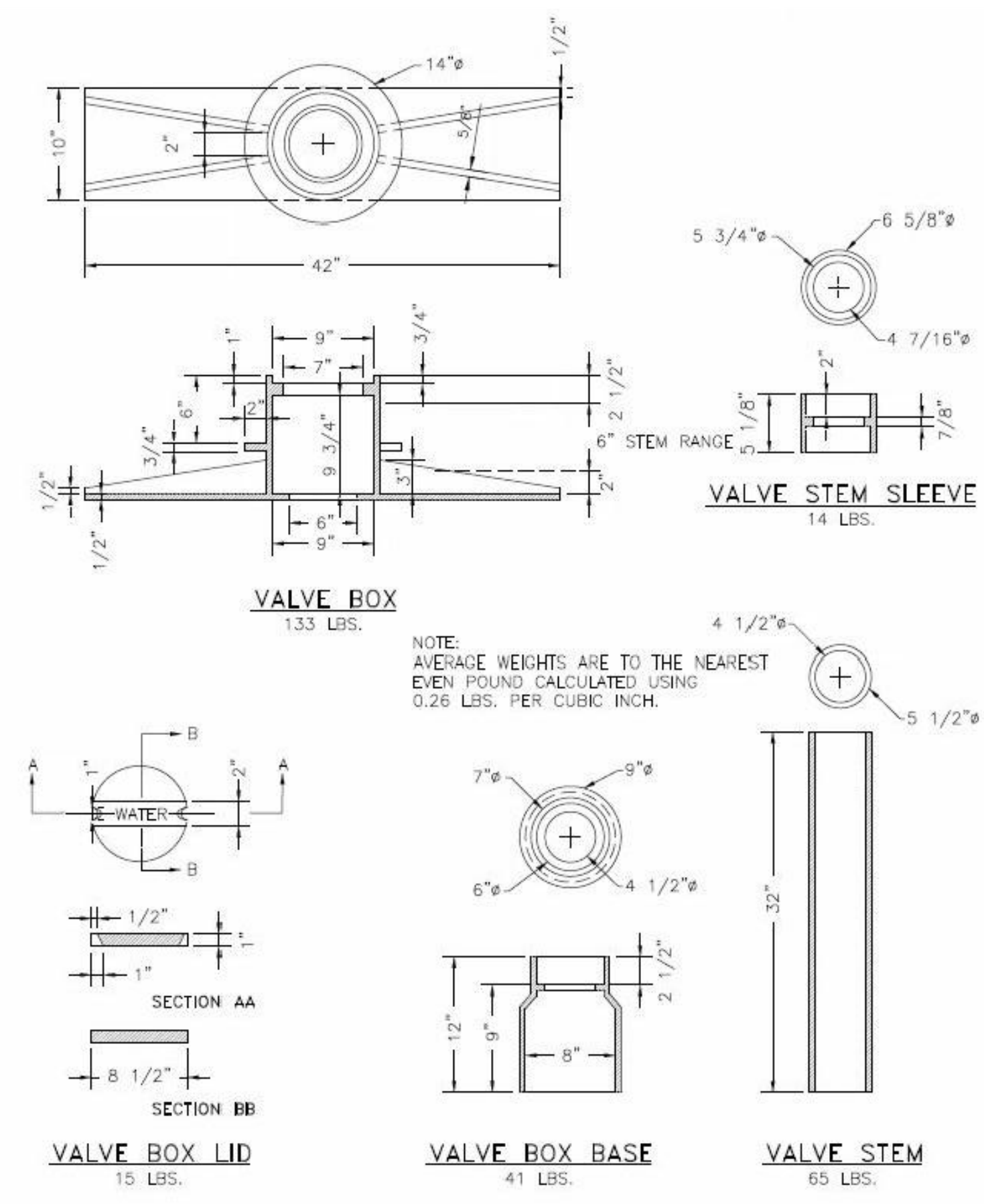


CALCULATED
JLB
CHECKED
NNS

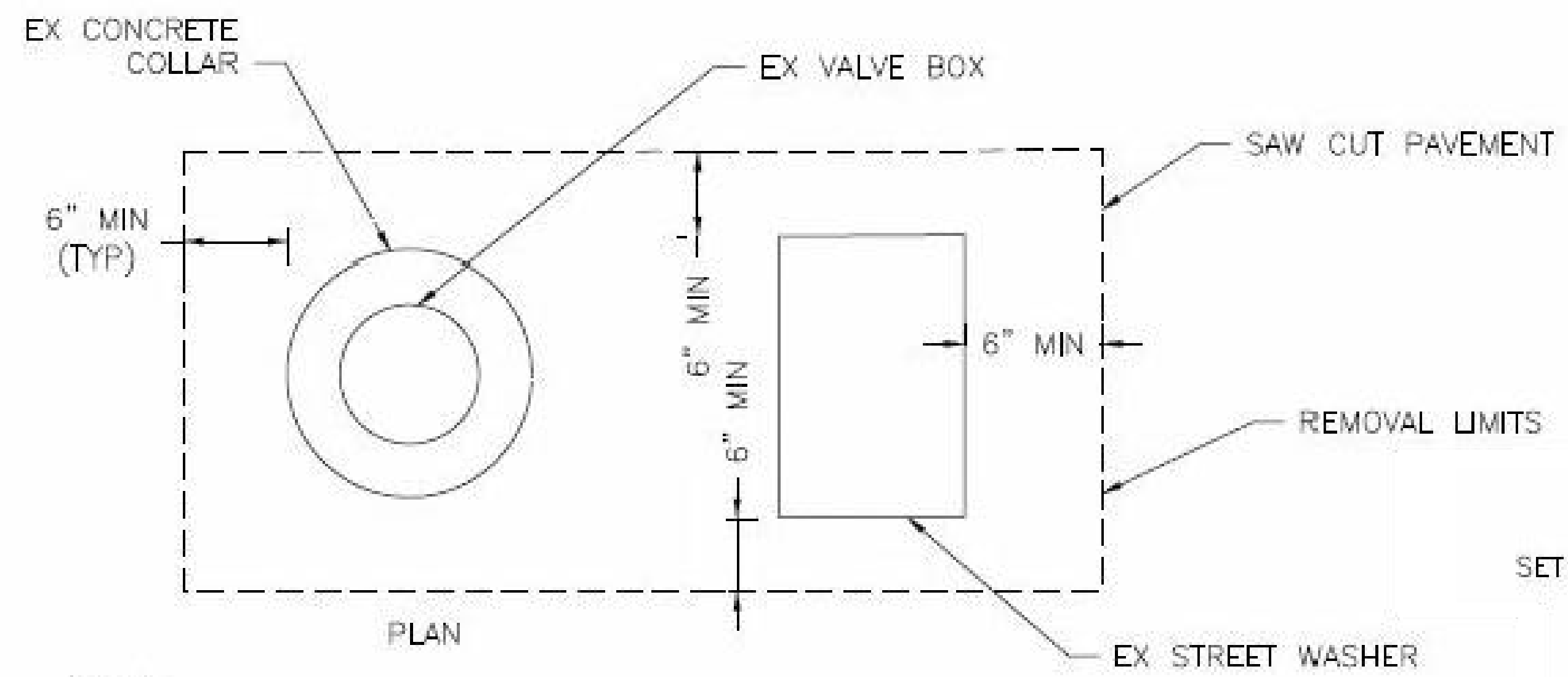
WATER WORKS DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

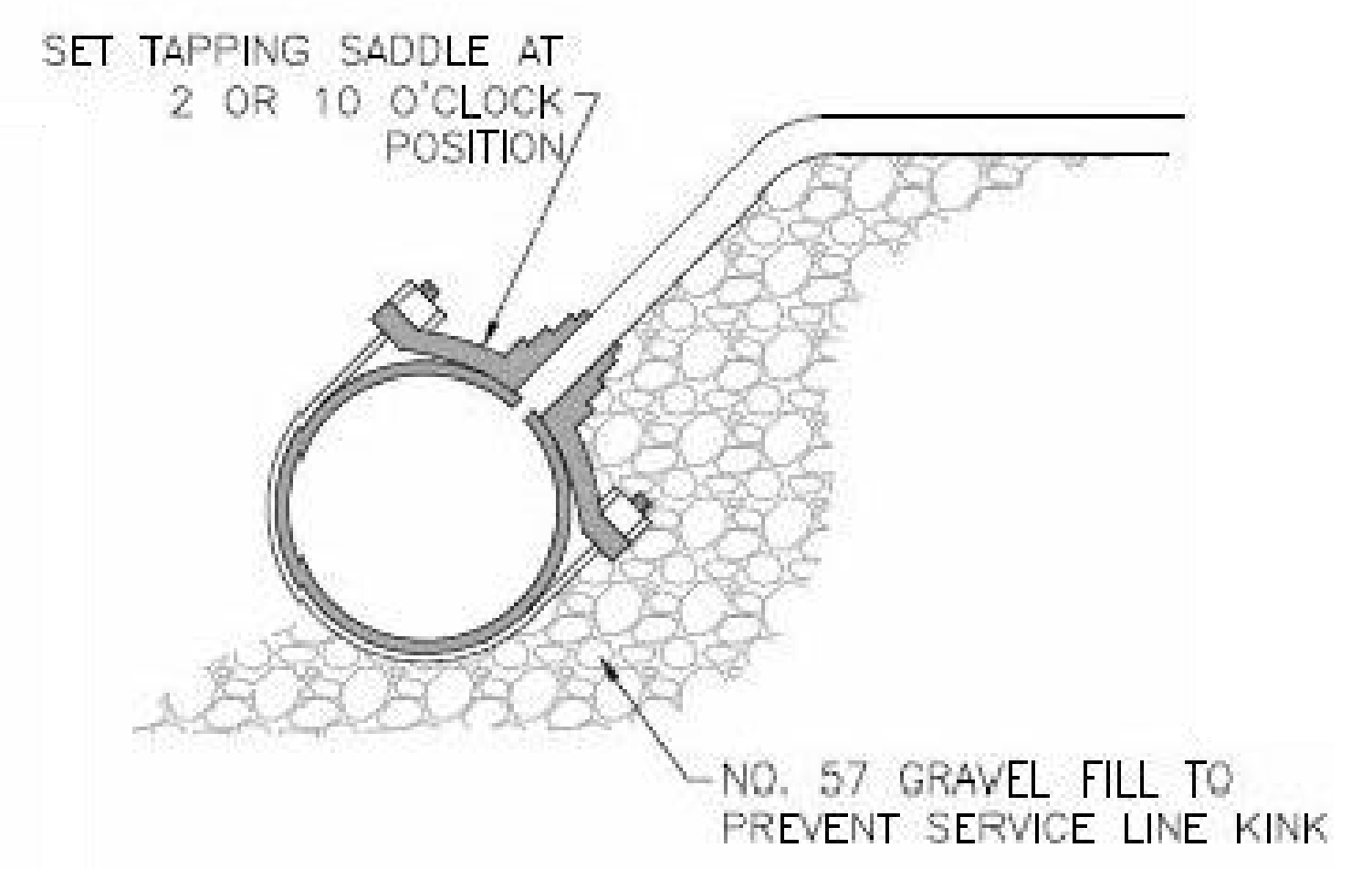


HEAVY DUTY VALVE BOX (TRAFFIC TYPE)
NOT TO SCALE

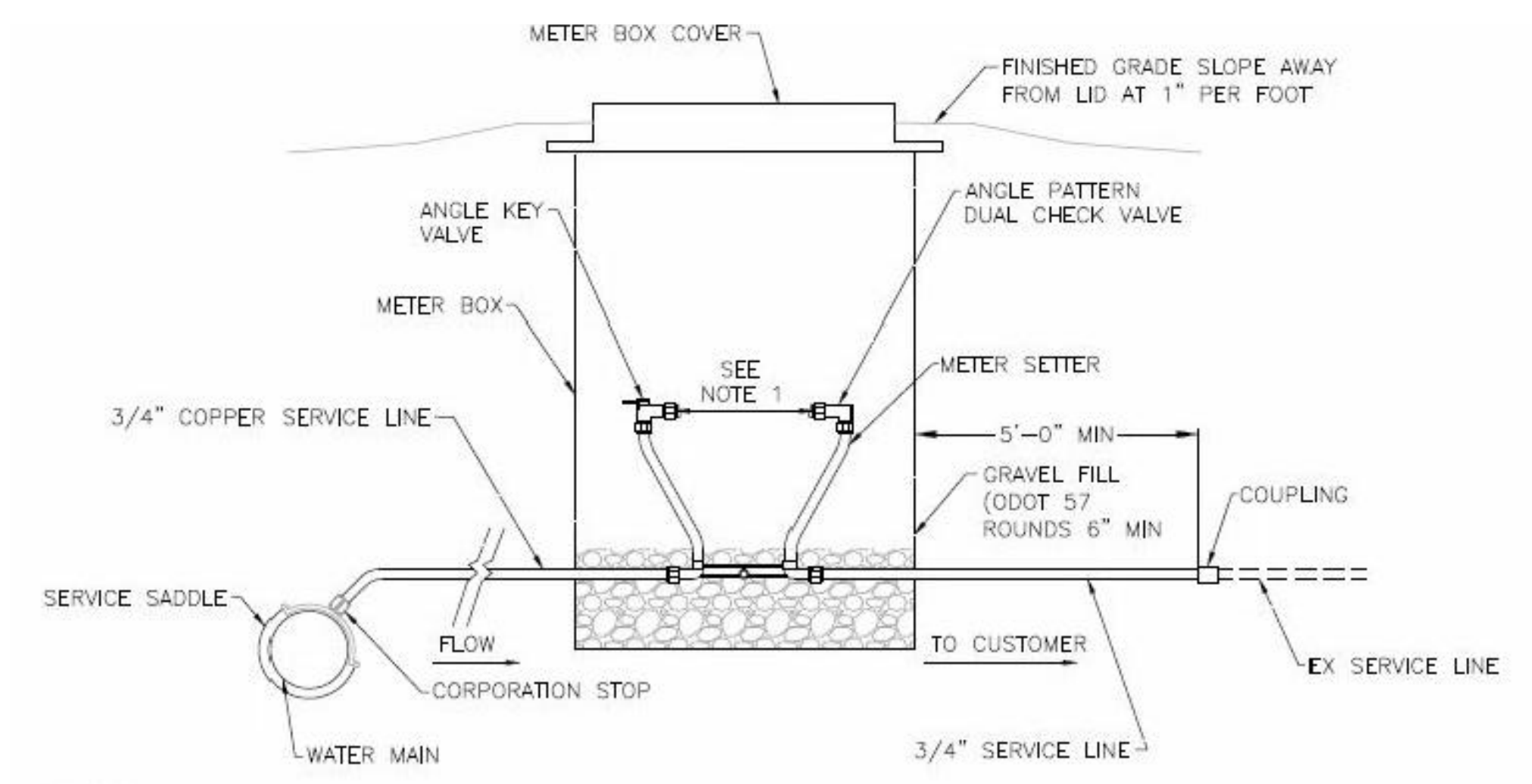


- NOTES:**
1. FOLLOWING ABANDONMENT OF EXISTING WATERLINE CONTRACTOR SHALL REMOVE/ABANDON EXISTING STREET WASHER AS SHOWN.
 2. PAVEMENT SHALL BE SAW CUT AT LIMITS SHOWN AND EXISTING MATERIALS REMOVED TO A MINIMUM OF 1' BELOW EXISTING GRADE.
 3. EXCAVATION SHALL BE BACKFILLED WITH 10" MIN. THICKNESS LOW STRENGTH MORTAR (LSM 100) ODOT ITEM 613, TYPE 1. LSM SHALL BE TOPPED WITH 2" MIN. THICKNESS ODOT ITEM 448 (SURFACE COURSE, TYPE 1, PG 64-22). REFER TO ASPHALT PAVEMENT REPAIR DETAIL FOR TACK COAT AND VERTICAL JOINT SEALER REQUIREMENTS

FLUSH MTD HYDRANT REMOVAL
NOT TO SCALE

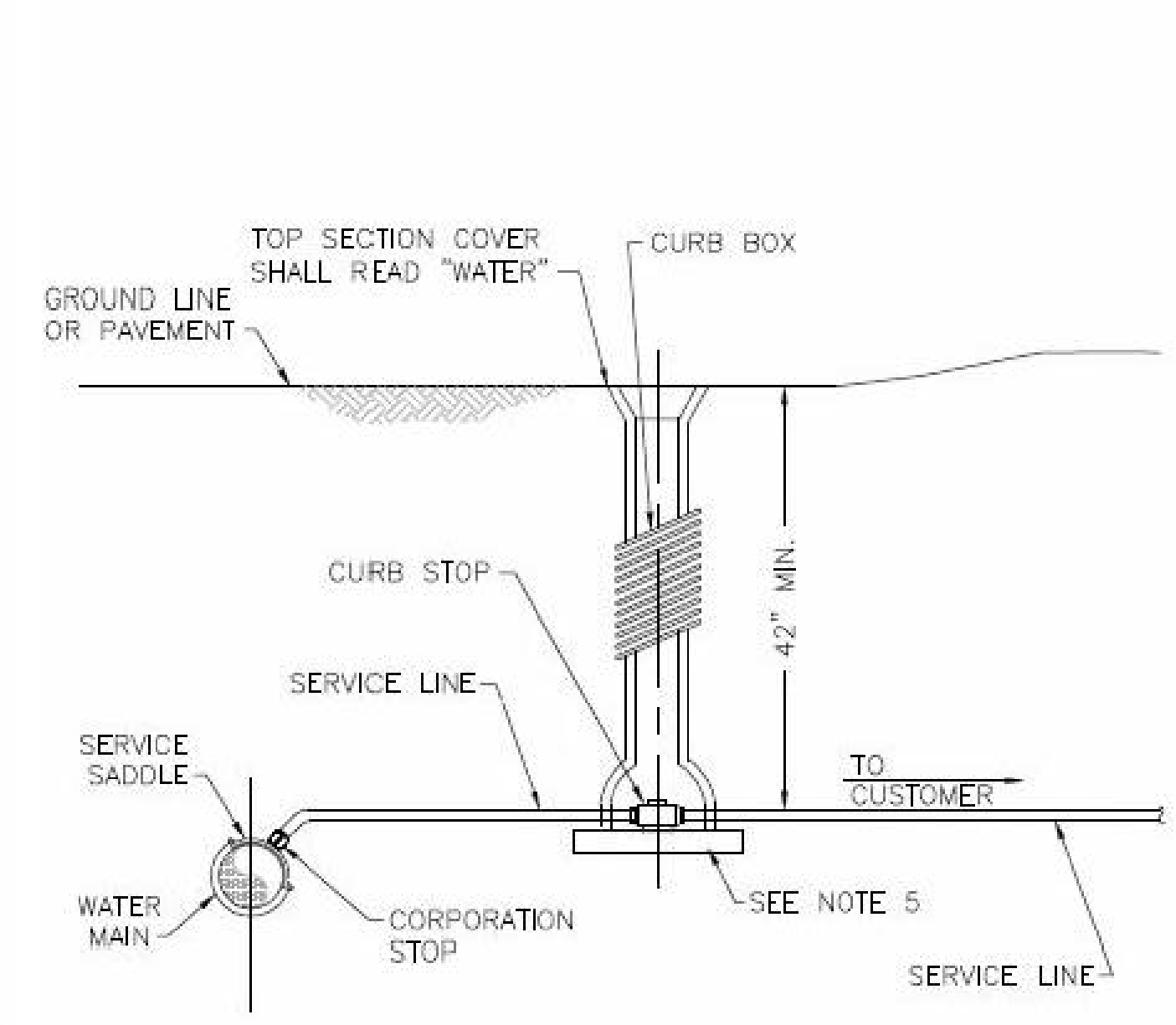


TAP DETAIL
NOT TO SCALE



- NOTES:**
1. STANDARD METERS SHALL BE 5/8" X 3/4" SERVICE METERS AS OUTLINED WITHIN SPECIFICATIONS.
 2. CONTRACTOR SHALL PROVIDE INSERT STIFFENERS AT ALL POINTS OF CONNECTION OF PE SERVICE LINE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 3. WHERE DESIGNATED, METER SETTERS SHALL BE SUPPLIED IN A TANDEM CONFIGURATION, INSTALLATION OF THIS TYPE SHALL BE SUPPLIED WITH INDIVIDUAL PRESSURE REDUCING VALVES, S-BARS AND NECESSARY UNIONS AND APPURTENANCES FOR A COMPLETE INSTALLATION.
 4. IN LOCATIONS WHERE PRESSURE EXCEEDS 200 PSI, TYPE K COPPER SERVICE LINE SHALL BE UTILIZED.

METER INSTALLATION
NOT TO SCALE

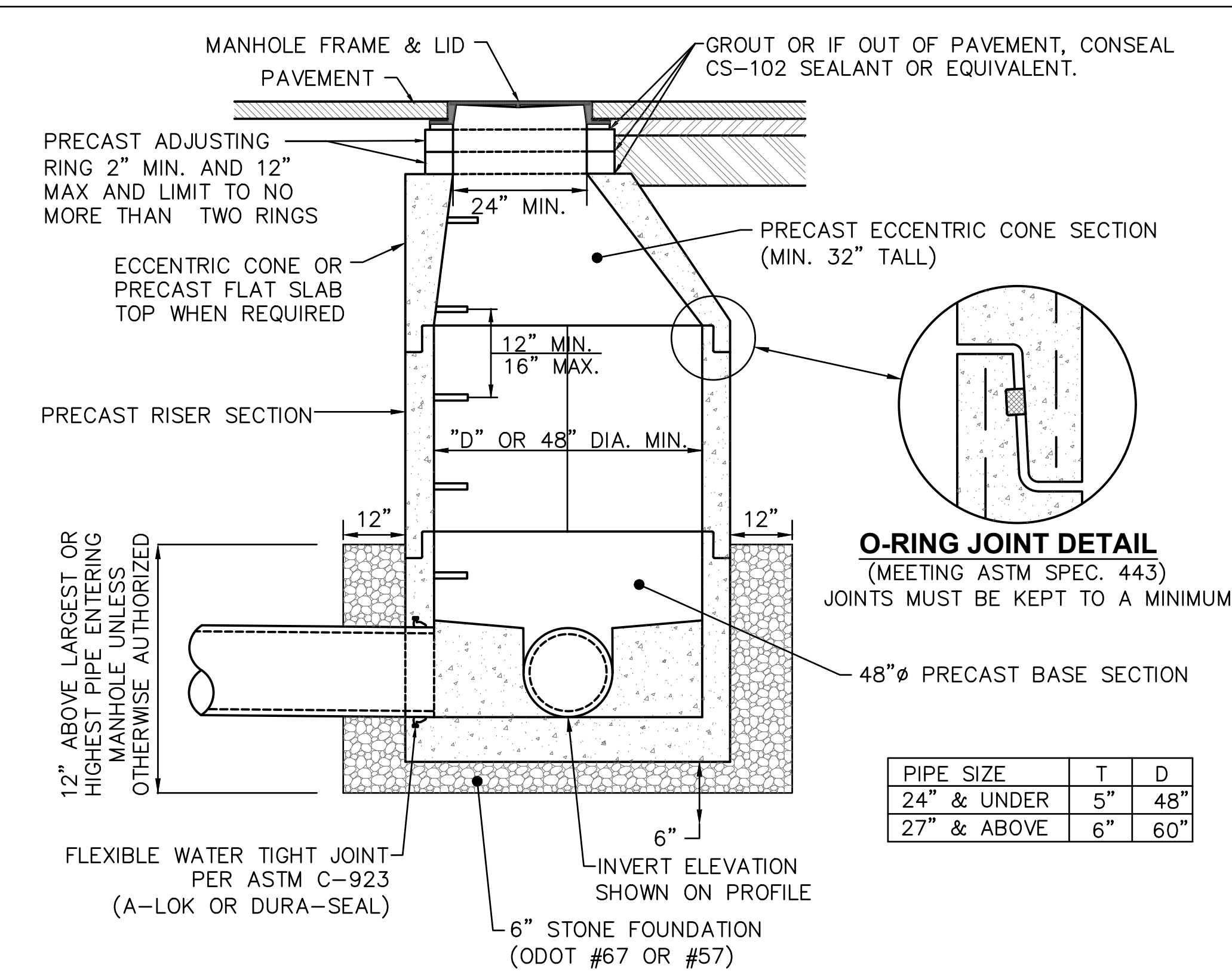


- NOTES:**
1. WATER SERVICE LINE SHALL BE A SINGLE PIECE OF PIPE WITHOUT JOINTS, COUPLING OR UNIONS BETWEEN:
- THE CORPORATION STOP AND CURB STOP
- THE CURB STOP AND THE METER SET.
 2. WATER SERVICE LINE SHALL BE INSTALLED UNDER PAVED AREAS W/O EXCAVATION USING THE DIRECTIONAL BORE OR OTHER MECHANICAL METHODS.
 3. WATER SERVICE LINE SHALL BE BEDDED USING SAME BEDDING AS MAIN LINE.
 4. AT THE TIME SITE GRADING AND LANDSCAPING IS COMPLETED, THE CURB BOX OVER THE CURB STOP SHALL:
- BE SET VERTICALLY OVER THE CURB STOP SO THAT A KEY CAN BE PLACED ON THE CURB STOP AND THE CURB STOP EASILY OPERATES TO THE FULLY OPEN AND CLOSED POSITIONS
- HAVE THE TOP SET AT THE FINISHED GRADE.
- BE UNBROKEN.
 5. PROVIDE FOOT PIECE FOR CURB BOX OR ALTERNATE FORM OF MANUFACTURED STABILIZER TO MAINTAIN POSITION OF CURB STOP.
 6. CONTRACTOR SHALL PROVIDE INSERT STIFFENERS AT ALL POINTS OF CONNECTION OF PE SERVICE LINE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

CURB STOP ASSEMBLY
NOT TO SCALE

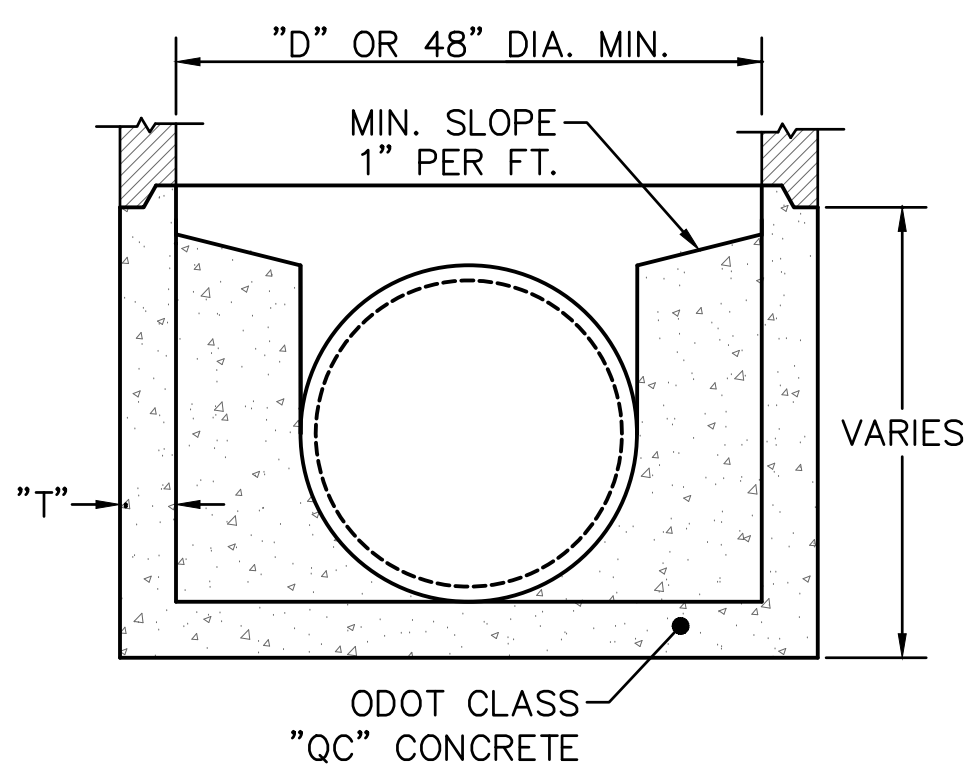
SANITARY SEWER MANHOLE NOTES

- SANITARY SEWER MANHOLE FRAME AND LID SHALL BE EQUAL TO NEENAH NO. R-1642 OR APPROVED FOR WATERTIGHT MANHOLES THE FRAME AND LID SHALL BE NEENAH NO. R-1642 (WITH GASKET) OR BOLT DOWN LIDS (AS REQUIRED BY THE FAYETTE COUNTY DEPARTMENT OF SANITARY SERVICES) SHALL BE NEENAH R1916-F. ALL SANITARY SEWER MANHOLE LIDS SHALL BE STAMPED "SANITARY SEWER". A RUBBER SEAL OR MASTIC SEAL BETWEEN THE MANHOLE FRAME AND TOP SECTION OF ADJUSTING RINGS IS REQUIRED. CONTRACTOR TO FURNISH WATERTIGHT FRAME AND LIDS UNLESS OTHERWISE INDICATED ON THE PLANS.
- NO LATERALS SHALL PROTRUDE INTO THE INTERIOR MANHOLE.
- MATERIALS FOR BASES, RISERS, AND OTHER PRECAST SECTIONS, INCLUDING REINFORCEMENTS, SHALL COMPLY WITH ASTM C-478.
- MAXIMUM SANITARY MANHOLE SPACING SHALL BE 400'.
- LOCATE THE CENTERLINE OF THE MANHOLE LID OVER THE CENTERLINE OF THE MAIN SEWER WHENEVER POSSIBLE.
- CONSEAL CS-102 FLEXIBLE BUTYL RESIN SEALANT OR EQUIVALENT SHALL BE 3/8"x1" MINIMUM STRIPS UNDER GRADE RINGS AND CASTING.
- CUT PIPE SHALL NOT EXTEND BEYOND THE INSIDE FACE OF THE MANHOLE WALL.
- CONCRETE PLACED INSIDE THE MANHOLE SHALL NOT BE PLACED BETWEEN THE PIPE AND THE OPENING SO AS TO INTERFERE IN ANY WAY WITH THE FLEXIBILITY OF THE JOINT.



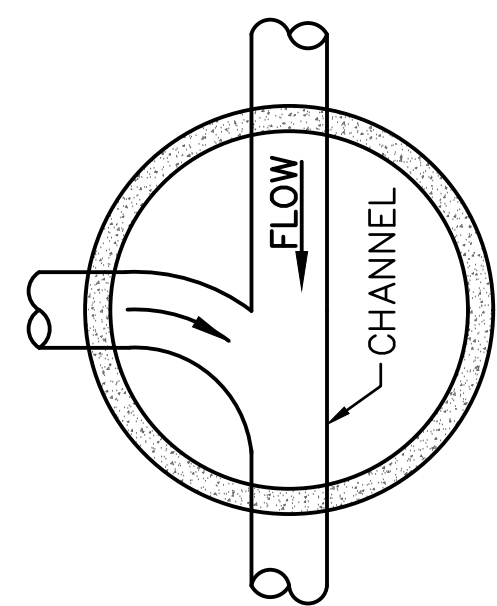
O-RING JOINT DETAIL
(MEETING ASTM SPEC. 443)
JOINTS MUST BE KEPT TO A MINIMUM

PIPE SIZE	T	D
24" & UNDER	5"	48"
27" & ABOVE	6"	60"



PRECAST BASE SECTION

SANITARY MANHOLE DETAIL



STANDARD INVERT CHANNEL

MANHOLE VACUUM TEST

ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED USING THE FOLLOWING PROCEDURES FROM ASTM C-1244.

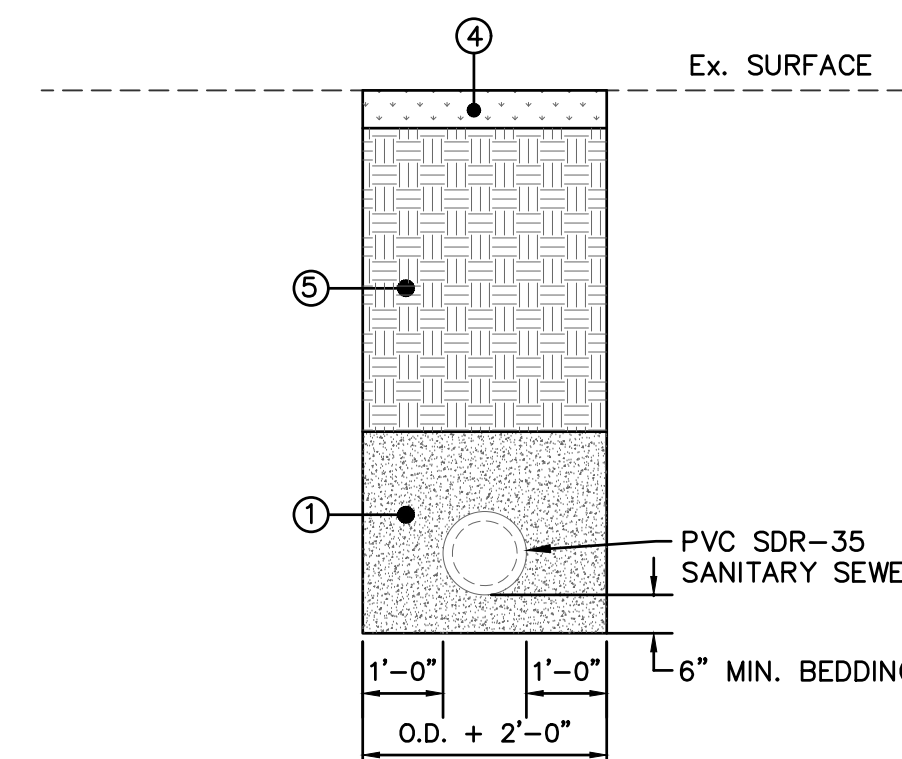
- PREPARATION OF THE MANHOLE
 - ALL LIFT HOLES SHALL BE PLUGGED.
 - ALL PIPES ENTERING THE MANHOLE SHALL BE TEMPORARILY PLUGGED, TAKING CARE TO SECURELY BRACE THE PIPES AND PLUGS TO PREVENT THEM FROM BEING DRAWN INTO THE MANHOLE.
- PROCEDURE
 - THE TEST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN THE CASTING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - A VACUUM OF 10 IN. OF MERCURY (4.9 PSI) SHALL BE DRAWN ON THE MANHOLE, THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF. THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 IN. OF MERCURY (4.4 PSI).
 - THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM 10 IN. OF MERCURY (4.9 PSI) TO 9 IN. OF MERCURY (4.4 PSI) MEETS OR EXCEEDS THE VALUES INDICATED ON THE TABLE.
 - IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE BY AN APPROVED METHOD. THE MANHOLE SHALL THEN BE RETESTED UNTIL A SATISFACTORY TEST IS OBTAINED.

DEPTH (FT.)	DIAMETER, INCHES		
	48	60	72
8 OR <	20	26	33
10	25	33	41
12	30	39	49
14	35	46	57
16	40	52	67
18	45	59	73
20	50	65	81
22	55	72	89
24	59	78	97
26	64	85	105
28	69	91	113
30	74	98	121

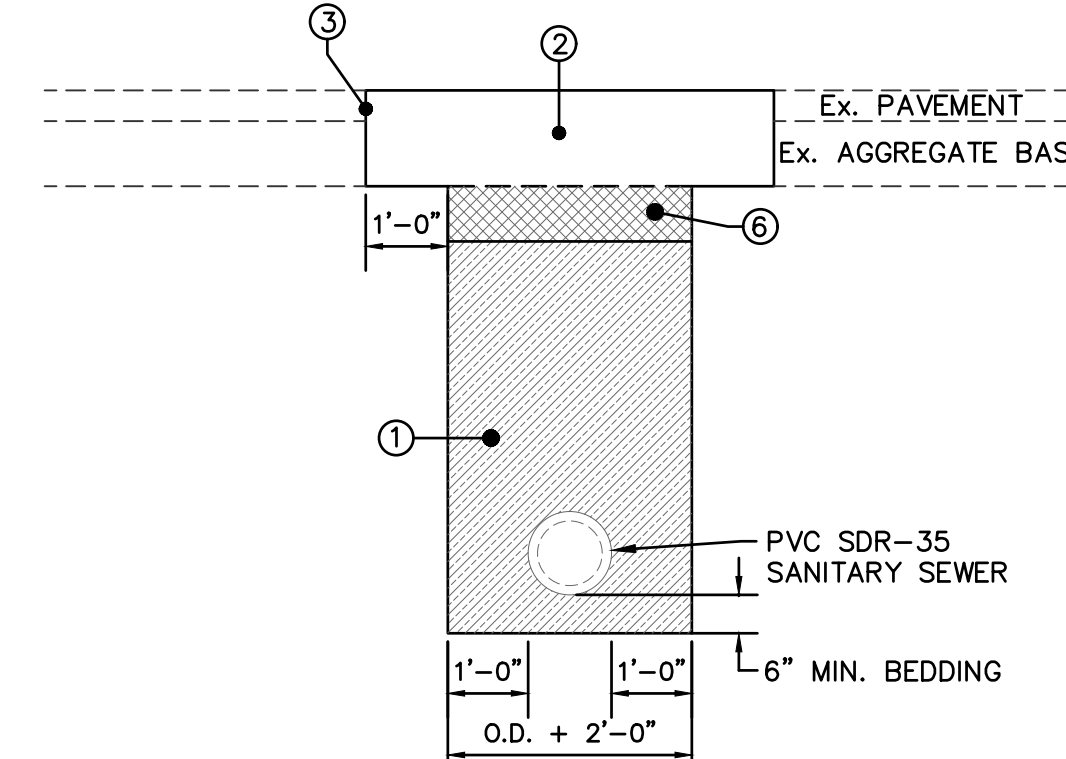
MINIMUM TEST TIMES FOR VARIOUS MANHOLE DIAMETERS

SANITARY SEWER NOTES

- SANITARY SEWERS SHALL CONFORM TO THE OEPA "TEN STATES STANDARDS" LATEST EDITION.
- POLYVINYL CHLORIDE PIPE (PVC) - PIPE AND FITTINGS SHALL CONFORM TO ASTM D3034. PIPE JOINTS AND GASKETS SHALL CONFORM TO ASTM D3212 AND F477 RESPECTIVELY. A MANUFACTURER'S CERTIFICATION THAT THE PRODUCT WAS MANUFACTURED, TESTED, AND SUPPLIED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE FURNISHED UPON REQUEST TO THE PROJECT ENGINEER. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION FROM THE MANUFACTURER. THE SEWER PIPE INSTALLED UNDER PAVED AREAS SHALL BE BACKFILLED WITH ODOT 703.11, TYPE 3, (#57 OR #67) AGGREGATE.
- SANITARY LATERAL CONNECTIONS - ALL "WYE" BRANCHES SHALL BE OF THE SAME MATERIAL AS THE MAIN SEWER. THEY SHALL BE A MINIMUM OF 6" IN DIAMETER, PLUGGED, AND MARKED ACCORDING TO THE APPROPRIATE STANDARD DRAWING.
- CLEAN WATER CONNECTIONS - ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- ALL FORCEMAIN SHALL BE CONSTRUCTED OF HDPE DR-11 PIPE, IN ACCORDANCE WITH ASTM F714. JOINTS SHALL BE HEAT FUSED PER ASTM F2620.



TRENCH DETAIL (UNPAVED AREAS)



TRENCH DETAIL (PAVED AREAS)

- STRUCTURAL BEDDING/BACKFILL SHALL BE ODOT 703.11 TYPE 3, (#57 OR #67) OR AS APPROVED BY THE ENGINEER, COMPACTED IN 8" LAYERS, COST TO BE INCLUDED IN COST OF SEWER PIPE.
- 4" MIN. ODOT ITEM 441, ASPHALT CONCRETE (MIN. 2 LIFTS)
- SAWCUT, 2" MINIMUM DEPTH
- 2" MINIMUM TOPSOIL PER ODOT ITEM 653 AND SEEDING AND MULCHING PER ODOT ITEM 659
- BACKFILL, PER ODOT ITEM 203
- ODOT ITEM 304 AGGREGATE BASE (MIN. 6")

SEWER PIPE LOW PRESSURE AIR TEST

ALL SANITARY SEWER MAINS SHALL BE LOW PRESSURE AIR TESTED USING THE FOLLOWING PROCEDURES FROM ASTM C-1417.

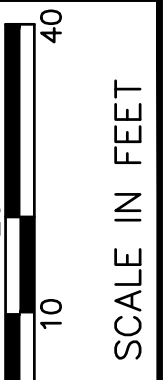
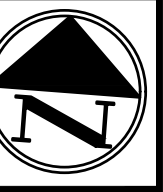
- AFTER BACKFILLING, THE AIR TEST SHALL BE CONDUCTED BETWEEN TWO CONSECUTIVE MANHOLES. ALL PIPE OUTLETS MUST BE PLUGGED IN THE SECTION BEING TESTED WITH SUITABLE TEST PLUGS. ONE OF THE PLUGS USED AT A MANHOLE MUST BE TAPPED AND EQUIPPED FOR AN AIR INLET CONNECTION FOR FILLING THE LINE FROM THE AIR COMPRESSOR. AIR SHALL BE SUPPLIED SLOWLY TO THE TEST SECTION UNTIL THE INTERNAL PRESSURE REACHES 4 PSI. IF THE PIPE IS BELOW EXISTING GROUNDWATER LEVEL, THE AIR TEST PRESSURE SHALL BE INCREASED TO OFFSET THE 0.43 PSI/FOOT OF WATER HEIGHT. IF THE HEIGHT OF GROUNDWATER IS 2 FEET OR MORE ABOVE THE TOP OF THE SEWER MAIN AT THE UPSTREAM END OR IF THE AIR PRESSURE REQUIRED FOR THE TEST IS GREATER THAN 9 PSI, THE AIR TEST PRACTICE SHOULD NOT BE USED.
- ONCE THE AIR PRESSURE REACHES 4 PSI REGULATE WAIT AT LEAST 2 MINUTES TO ALLOW THE AIR PRESSURE TO STABILIZE. WHEN THE PRESSURE HAS STABILIZED AND IS BETWEEN 3.5 TO 4.0 PSI, THE AIR SUPPLY SHALL BE DISCONNECTED AND THE PRESSURE REDUCED TO 3.5 PSI AND THE TIMING SHALL BEGIN WITH A STOP WATCH. THE STOP WATCH SHALL BE ALLOWED TO RUN UNTIL THE PRESSURE HAS DROPPED 1.0 PSI. IF THE TIME SHOWN ON THE STOP WATCH IS GREATER THAN THE SPECIFIED MINIMUM TIME, THE SECTION SHALL BE CONSIDERED TO HAVE PASSED THE TEST. TIME MAY BE INTERPOLATED FROM THE FIGURES LISTED BELOW.

PIPE DIA. (IN.)	Time for Longer Length (sec)	Specified Minimum for Length (L) Shown (min:sec)						
		100 FT.	150 FT.	200 FT.	250 FT.	300 FT.	350 FT.	400 FT.
4	0.380L	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	0.854L	5:40	5:40	5:40	5:40	5:40	5:40	5:42
8	1.520L	7:34	7:34	7:34	7:34	7:36	8:52	10:08
10	2.374L	9:26	9:26	9:26	9:53	11:52	13:51	15:49
12	3.418L	11:20	11:20	11:24	14:15	17:05	19:56	22:47
15	5.342L	14:10	14:10	17:48	22:15	26:42	31:09	35:36
18	7.692L	17:00	19:13	25:38	32:03	38:27	44:52	51:16
21	10.470L	19:50	26:10	34:54	43:37	52:21	61:00	69:48
24	13.674L	22:47	34:11	45:34	56:58	68:22	79:46	91:10

SPECIFICATION TIME FOR LENGTH (L) SHOWN (MIN-SEC.)

SANITARY SEWER DEFLECTION TEST

- DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AS LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM.
- NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. IF DEFLECTION EXCEEDS 5 PERCENT, REPLACEMENT OR CORRECTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH REQUIREMENTS OF APPROVING AGENCY.
- THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS MANUFACTURED. THE PIPE SHALL BE MEASURED IN COMPLIANCE WITH ASTM D-2122 STANDARD TEST METHOD OF DETERMINING DIMENSIONS OF THERMOPLASTIC PIPE AND FITTINGS. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.



CALCULATED
JLB
CHECKED
NNS

SANITARY SEWER DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

HYDROSTATIC TESTING OF FORCEMAIN

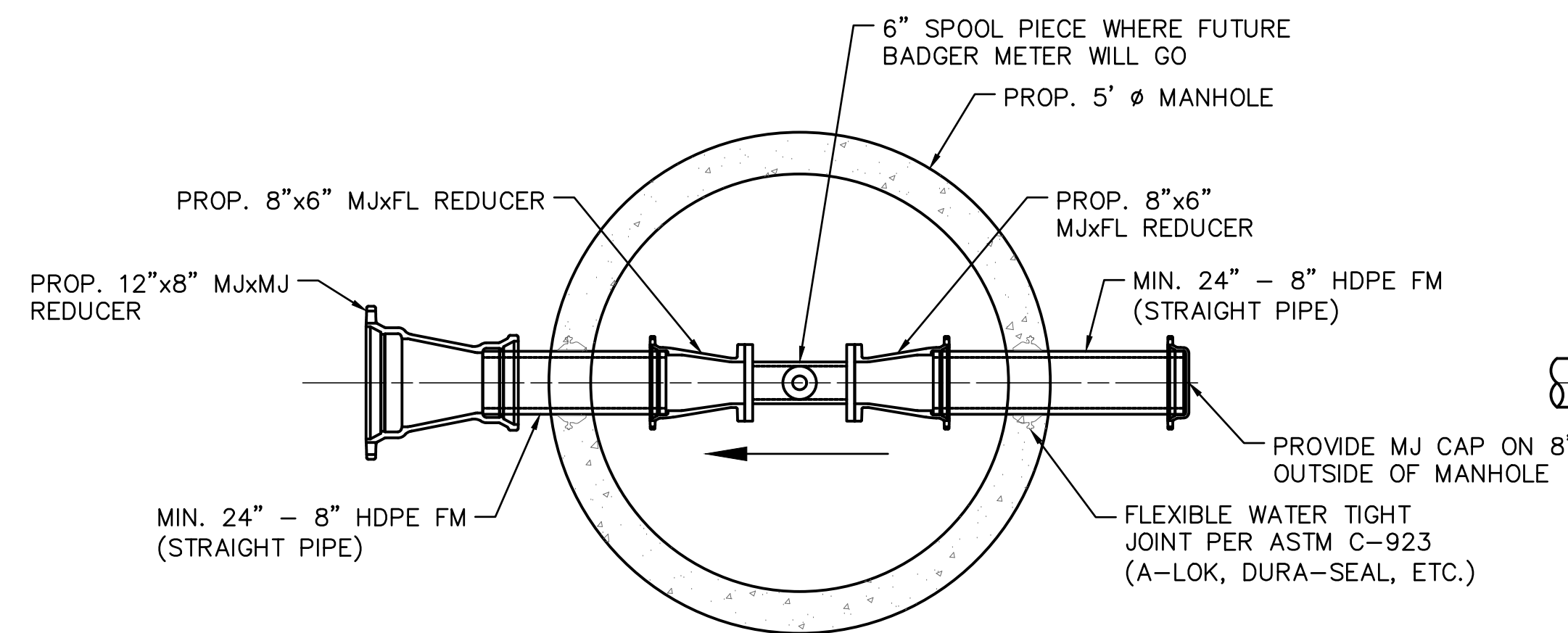
A. AFTER THE PIPE HAS BEEN LAID AND BACKFILLED, ALL NEWLY LAID PIPE OR VALVED SECTION SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE AND LEAKAGE TEST. ALL HDPE FORCEMAINS MUST BE HYDROSTATICALLY TESTED FOLLOWING ASTM F-2164, "STANDARD PRACTICE FOR FIELD LEAK TESTING OF POLYETHYLENE (PE) PRESSURE PIPING SYSTEM USING HYDROSTATIC PRESSURE." THE TESTS MUST BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE OF THE SHELBY COUNTY SEWER DISTRICT. THE LEAKAGE TEST PRESSURE SHALL BE 1.5 TIMES THE OPERATING PRESSURE OR 150 PSI, WHICHEVER IS GREATER. THE DURATION OF THE LEAKAGE TEST PHASE SHALL NOT BE LESS THAN 1 HOUR. HYDROSTATIC PRESSURE SHALL BE APPLIED BY MEANS OF A PUMP TAKING WATER FROM AN AUXILIARY SUPPLY. ALL PIPING MUST BE PROPERLY FILLED AND FLUSHED TO DISPEL ALL AIR BEFORE THE TEST IS MADE USING POTABLE WATER.

B. LEAKAGE IS DEFINED AS THE QUANTITY OF WATER TO BE SUPPLIED INTO THE NEWLY LAID PIPE, OR ANY VALVED SECTION THEREOF, NECESSARY TO MAINTAIN THE SPECIFIED LEAKAGE TEST PRESSURE AFTER THE PIPE HAS BEEN FILLED WITH WATER AND THE AIR EXPELLED.

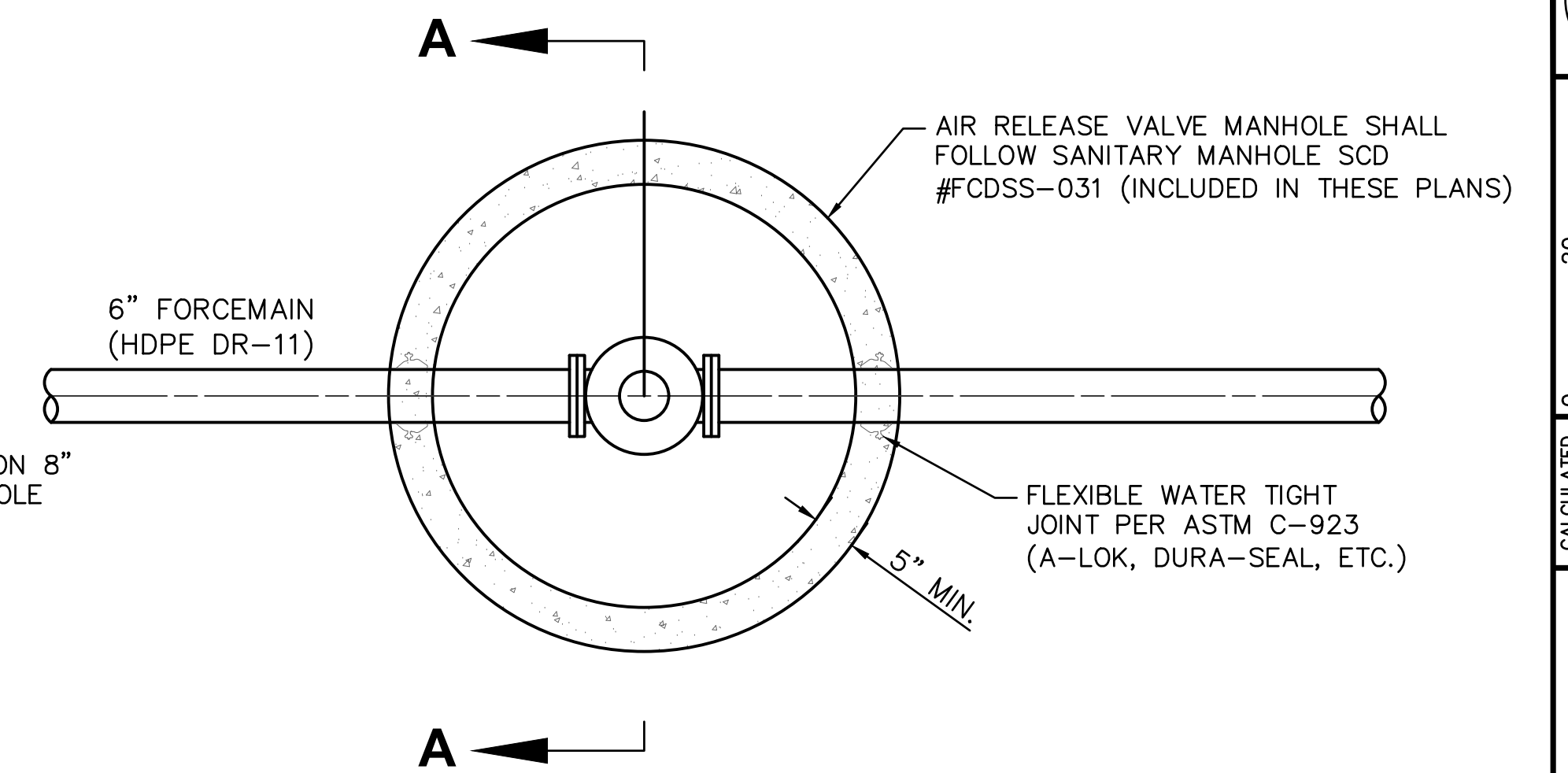
C. DURING THE HYDROSTATIC TEST, A THOROUGH EXAMINATION OF ALL PIPING, FITTINGS, VALVES, HYDRANTS, ETC. SHALL BE PERFORMED. LEAKING JOINTS SHALL BE TIGHTENED AND CRACKED OR OTHERWISE DEFECTIVE MATERIAL SHALL BE REMOVED AND REPLACED AND THE TEST SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.

D. THERE IS NO LEAKAGE ALLOWANCE FOR A SECTION OF HEAT-FUSION JOINT POLYETHYLENE PIPING, BECAUSE PROPERLY MADE HEAT FUSION JOINTS DO NOT LEAK.

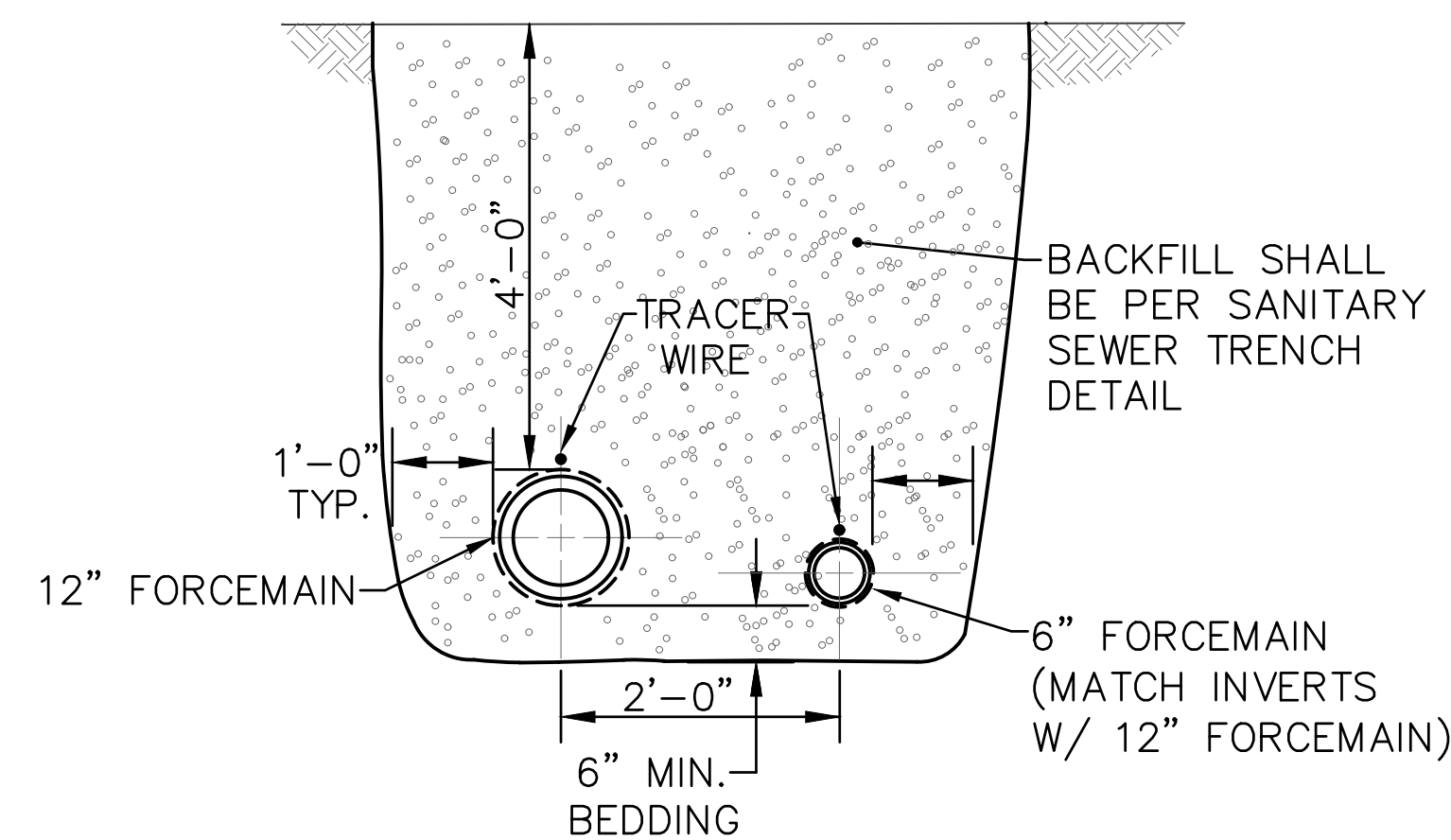
E. IF NO VISUAL LEAKAGE IS OBSERVED AND THE PRESSURE DURING THE TESTING PHASE HOLDS STEADY (WITHIN 5% OF THE TEST PHASE PRESSURE) FOR THE 1 HOUR TEST PHASE PERIOD, A PASSING TEST IS INDICATED.



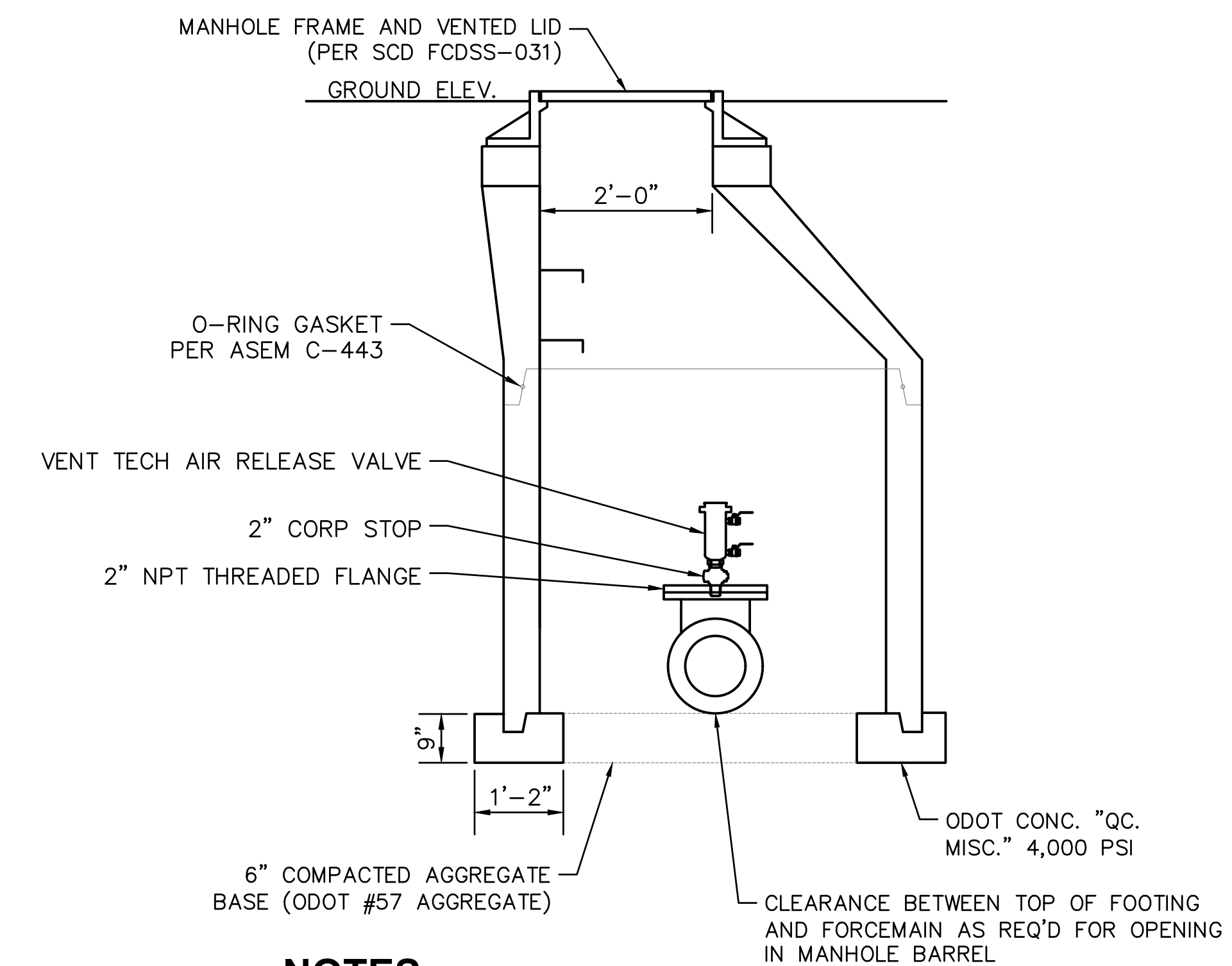
FUTURE MAG METER MANHOLE



AIR RELEASE VALVE MANHOLE PLAN VIEW



FORCEMAIN TRENCH DETAIL

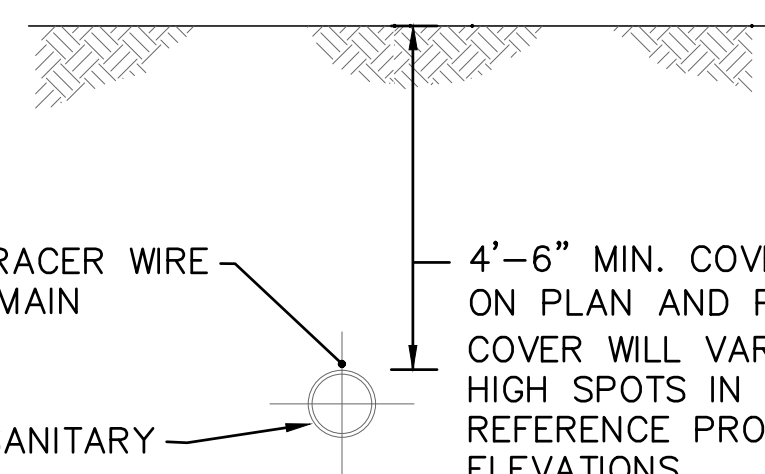


NOTES

- FLEXIBLE BUTYL RUBBER SEALANT EQUAL TO CONSEAL TYPE CS-302 SHALL BE USE TO: SEAL CASTING TO MANHOLE, SEAL ADJUSTING RINGS TOGETHER, SEAL RINGS TO CONE SECTION, AND SEAL MANHOLE SECTIONS TOGETHER.
- INSTALL KOR-N-SEAL GASKETS AT MANHOLE INTERFACE WITH PIPE.

AIR RELEASE VALVE MANHOLE SECTION "A-A"

AT STA. 72+20 ON 6" FORCEMAIN ONLY



SANITARY SEWER FORCEMAIN TRACER WIRE DETAILS

NOTES

INSTALLATION:

DIRECTIONAL DRILL CONSTRUCTION: TRACER WIRE SHALL BE COPPERHEAD SOLOSHOT EHS REINFORCED TRACER WIRE MANUFACTURED BY COPPERHEAD INDUSTRIES, LLC. OR APPROVED EQUIVALENT.

OPEN CUT CONSTRUCTION: TRACER WIRE SHALL BE COPPERHEAD HS REINFORCED TRACER WIRE MANUFACTURED BY COPPERHEAD INDUSTRIES, LLC OR APPROVED EQUIVALENT.

TRACER WIRE MUST BE RUN ON TOP OF THE FORCEMAIN CONTINUOUSLY FOR THE FULL LENGTH OF THE PIPE. TRACER WIRE SHALL BE TAPED TO THE PIPE USING 1-1/2" POLYETHYLENE TAPE WRAPPED TWICE AROUND THE PIPE. TRACER WIRE WILL COME TO THE SURFACE AT THE VALVE VAULT AND ANY AN AIR RELEASE VALVE STRUCTURE.

TRACER WIRE THAT MUST BE SPLICED SHALL USE SNAKEBITE TRACER WIRE CONNECTORS MANUFACTURED BY COPPERHEAD INDUSTRIES, LLC OR APPROVED EQUIVALENT.

ALL MATERIAL, LABOR, EQUIPMENT NEEDED FOR THE INSTALLATION OF THE TRACER WIRE SHALL BE INCIDENTAL TO THE FORCEMAIN INSTALLATION.



FORCEMAIN UTILITY MARKER

PROVIDE MARKERS INDICATING THE FORCEMAIN LOCATION AT APPROXIMATELY EVERY 500 FT. OR AT ANY SIGNIFICANT BENDS (WWW.RHINOMARKS.COM)

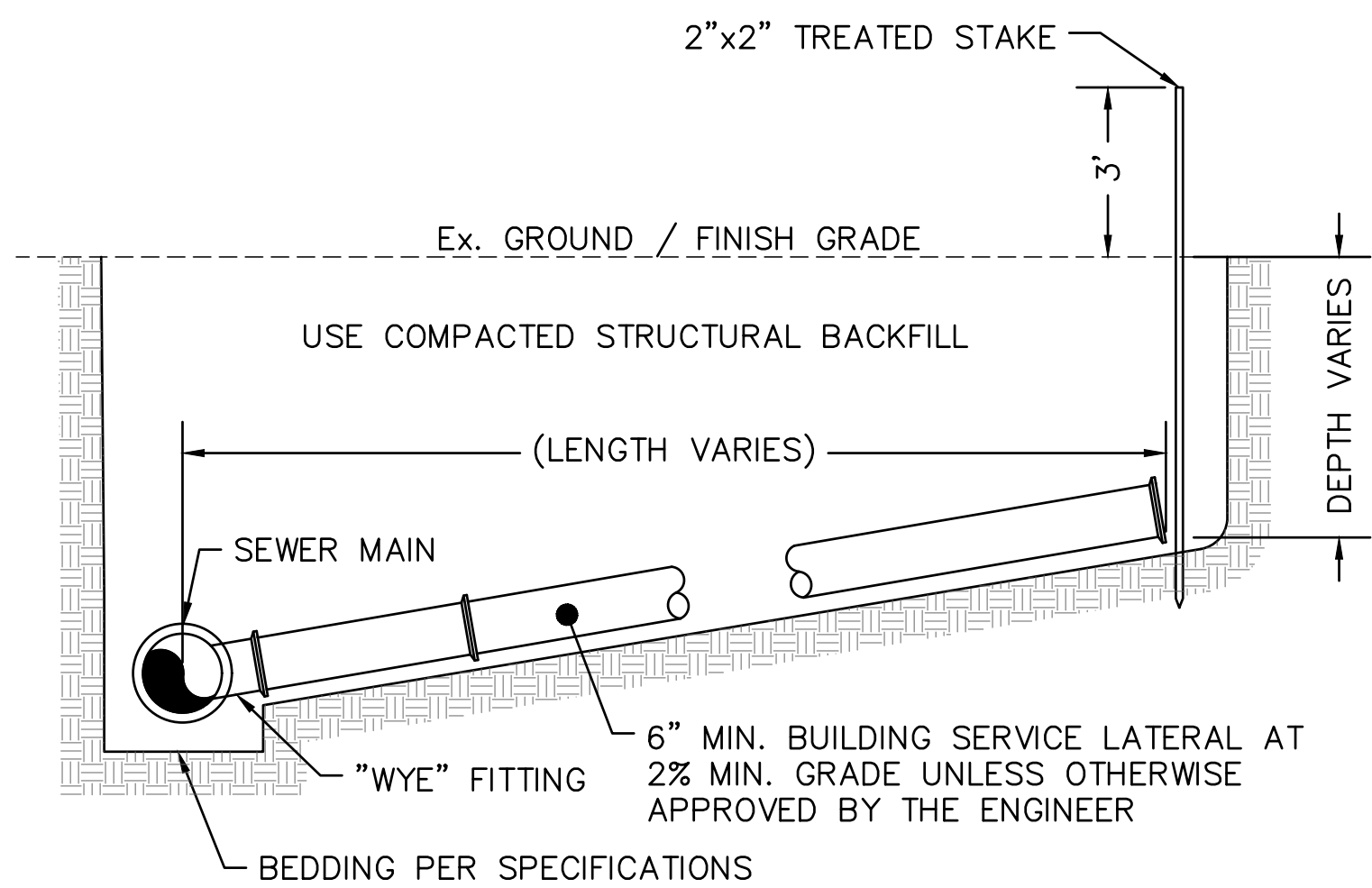


CALCULATED
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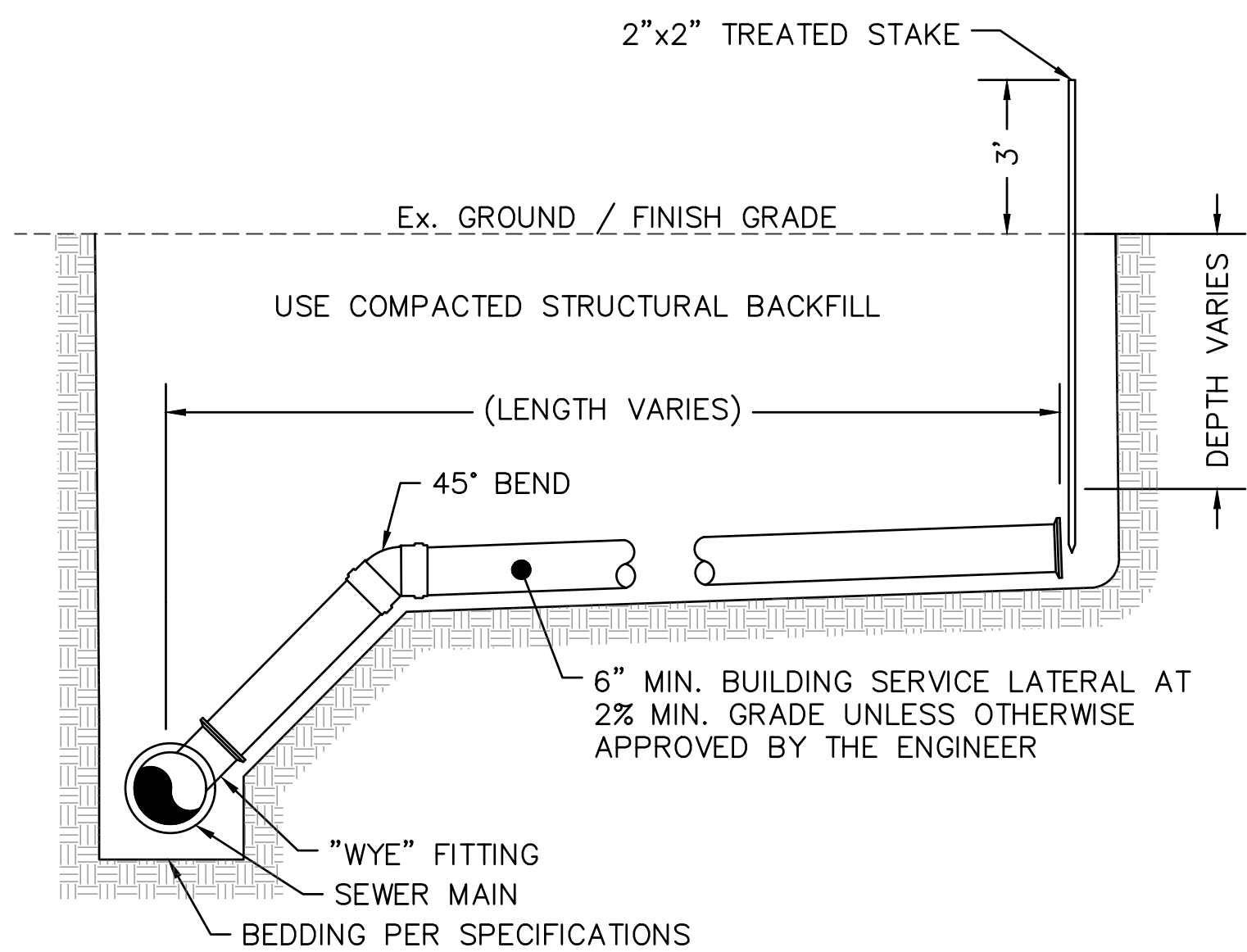
LIFT STATION AND FORCEMAIN DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

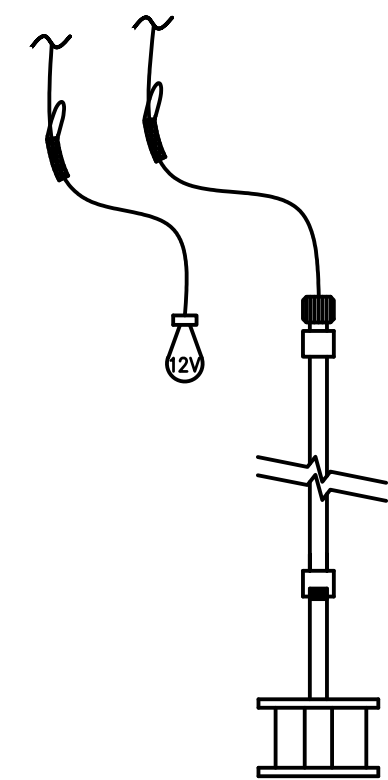
BLUEGRASS BLVD. PHASE 1



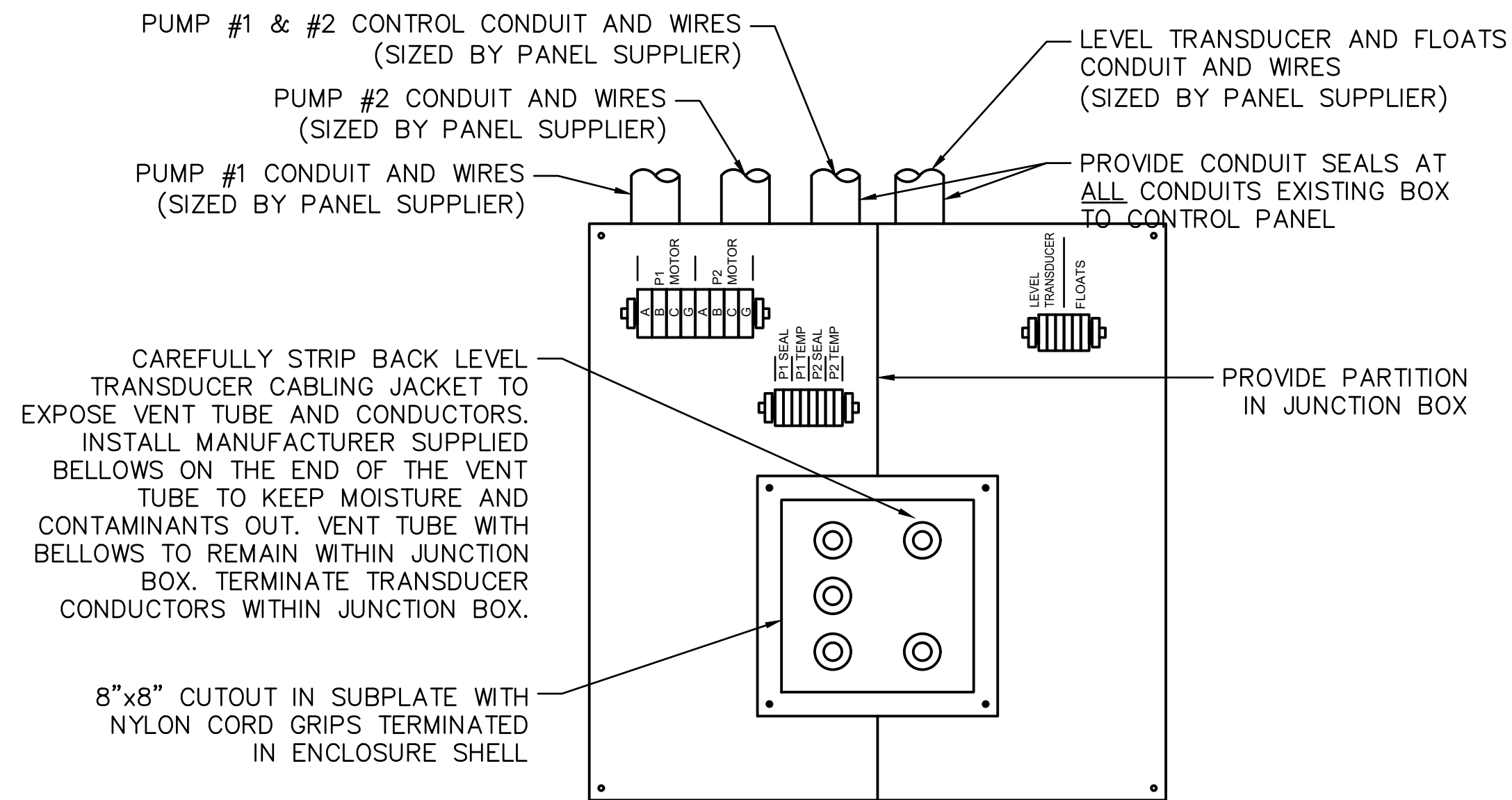
SHALLOW SEWER LATERAL DETAIL



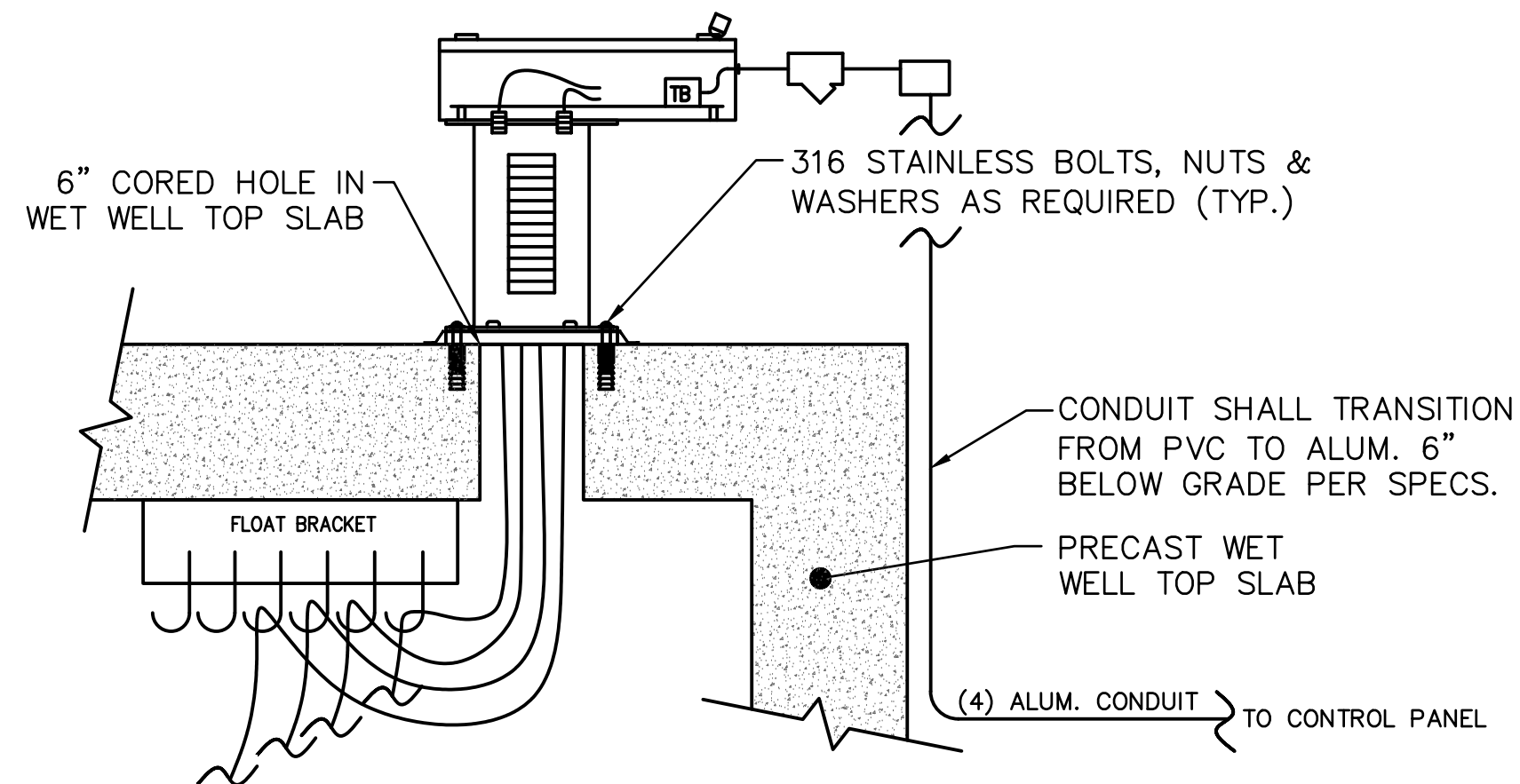
STANDARD SEWER LATERAL DETAIL



LEVEL TRANSDUCER & FLOAT SWITCH DETAIL



WET WELL JUNCTION BOX - PLAN VIEW



WET WELL JUNCTION BOX - PROFILE VIEW

LIFT STATION DESIGN DATA

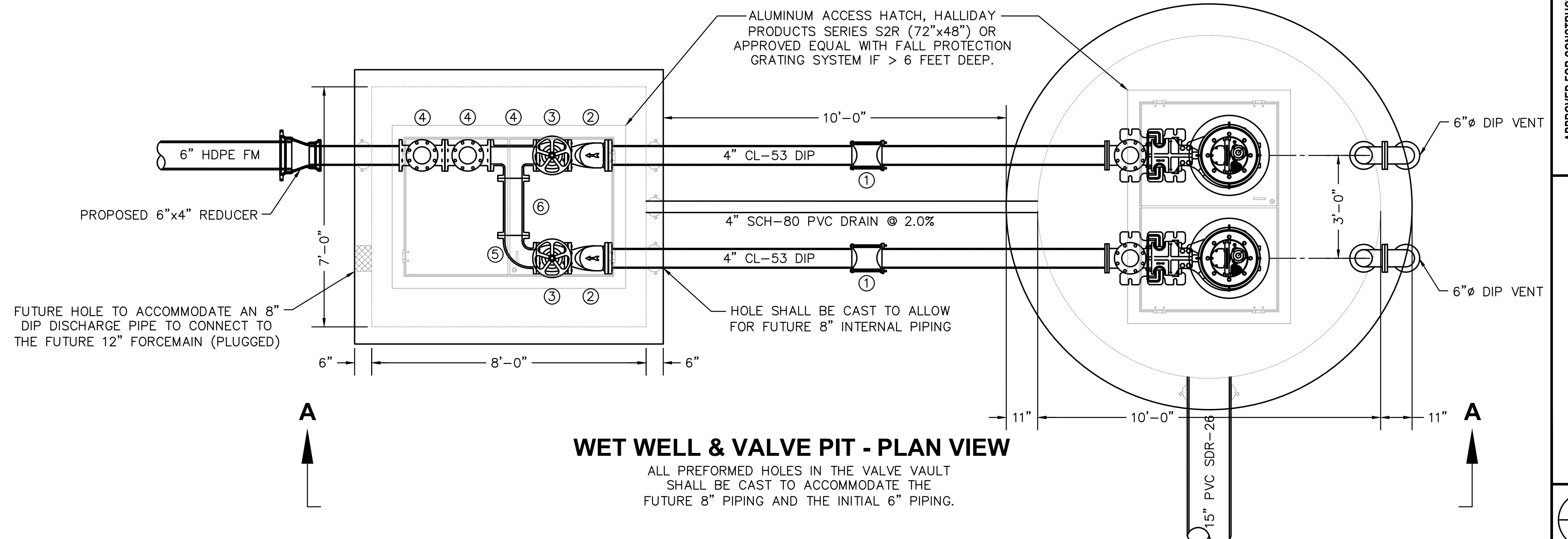
- THE PROPOSED BLUEGRASS BOULEVARD DEVELOPMENT PUMP STATION WILL SERVICE APPROXIMATELY 2,120 ACRES OF EITHER 11-INDUSTRIAL OR FARMLAND TO COMMERCIAL PROPERTY.
- THE PROPOSED PUMP STATION WILL BE A DUPLEX OPERATED STATION WITH DUAL ALTERNATING PUMPS.
- PREVIOUSLY A 12" FORCEMAIN WAS SIZED TO ACCOMMODATE A POTENTIAL FUTURE PEAK FLOW OF 2.1 MGD OR 1,459 GPM.
- THE START-UP FLOWS FOR THE SYSTEM WERE BASED ON ONE FACILITY "PROJECT ZEUS" BEING BUILT ALONG BLUEGRASS BOULEVARD. THE FACILITY WILL GENERATE A FLOW OF 4,000 GPD.
- IN ORDER TO MAINTAIN 2.5 FPS VELOCITY IN THE 6" HDPE DR-11 FORCEMAIN A 180 GPM SUBMERSIBLE PUMP IS REQUIRED. A 15 HP, 1760 RPM, EBARA MODEL 80DLCMKFU611, SUBMERSIBLE PUMP WILL BE UTILIZED. THE PUMP WILL HAVE THE CAPABILITY OF PUMPING 180 GPM AT 80 TDH.
- THE START-UP INTERNAL DISCHARGE PIPING AND COMPONENTS WILL BE SIZED FOR 6"Ø. TO ACCOMMODATE THE FUTURE FLOWS THE PIPING WILL NEED TO BE CHANGED TO 8"Ø. THE INITIAL PIPING LAYOUT SPACING IS SET UP TO ALLOW FOR THE FUTURE PIPING.
- BOTH PUMPS WILL UTILIZE THE SAME 6"Ø BASE FLANGE AND GUIDE RAIL SYSTEM SO NO ADDITIONAL IMPROVEMENTS WILL BE NEEDED IN THE FUTURE.
- A 15" GRAVITY SEWER WILL COLLECT AND DISCHARGE INTO THE WET WELL AT 1020.81.

SYM.	COMPONENT DESCRIPTION
①	EXPANSION COUPLING
②	CHECK VALVE
③	PLUG VALVE
④	DIP TEE FITTING
⑤	DIP 90° BEND FITTING
⑥	10" LONG SOLID SLEEVE FITTING
⑦	QUICK DISCONNECT ASSEMBLY
⑧	VENT TECH AIR RELEASE VALVE, 2" CORP STOP, 2" NPT THREADED FLANGE

COMPONENT LIST

WET WELL & VALVE PIT NOTES

- THE WET WELL AND VALVE PIT SHALL BE CONSTRUCTED AS SHOWN ON THIS SHEET UNLESS OTHERWISE DIRECTED BY THE FAYETTE COUNTY SANITARY ENGINEER.



WET WELL & VALVE PIT - PLAN VIEW

ALL PREFORMED HOLES IN THE VALVE VAULT SHALL BE CAST TO ACCOMMODATE THE FUTURE 8" PIPING AND THE INITIAL 6" PIPING.

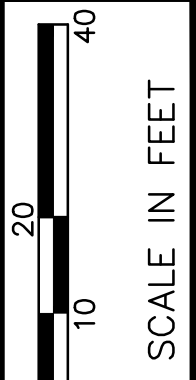
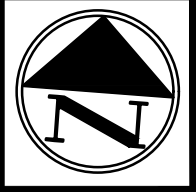


CALCULATED JLB
CHECKED NNS

SANITARY LIFT STATION AND FORCEMAIN DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

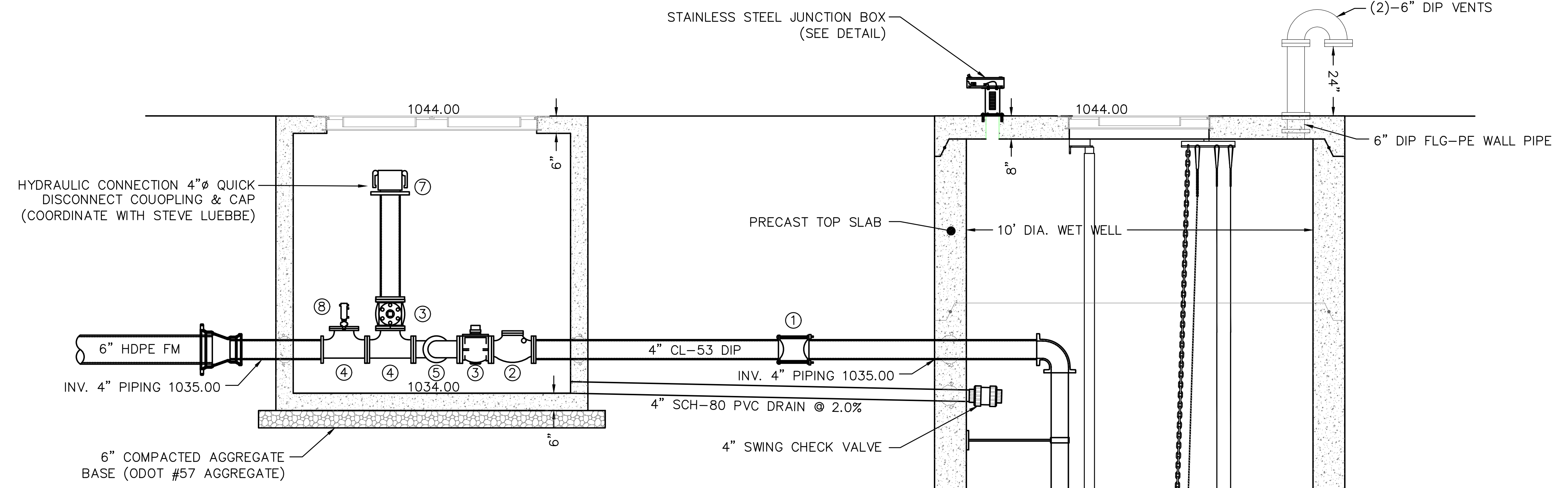


CALCULATED
JLB
CHECKED
NNS

**SANITARY LIFT STATION AND
FORCEMAIN DETAILS**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



SYM.	COMPONENT DESCRIPTION
①	EXPANSION COUPLING
②	4" CHECK VALVE
③	4" PLUG VALVE
④	4" DIP TEE FITTING
⑤	4" DIP 90° BEND FITTING
⑥	4" SOLID SLEEVE FITTING
⑦	QUICK DISCONNECT ASSEMBLY
⑧	VENT TECH AIR RELEASE VALVE, 2" CORP STOP, 2" NPT THREADED FLANGE

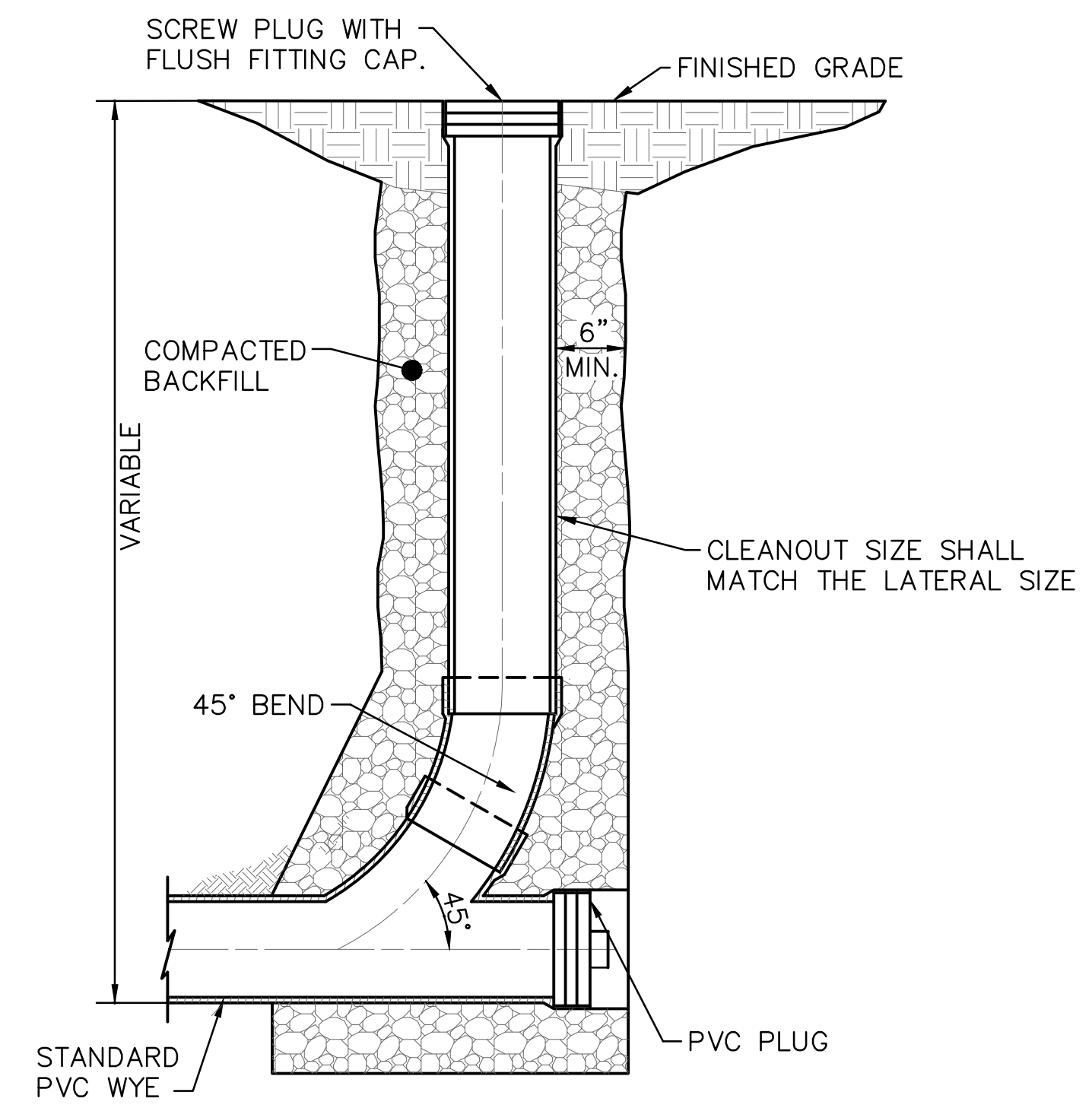
COMPONENT LIST

INTERMEDIATE RAIL SUPPORT BRACKET
(PER PUMP MANUF. SPECIFICATIONS)
OR A MIN. OF EVERY 6 VERTICAL FEET

PIPE SUPPORTS (PER PUMP MANUFACTURER'S
SPECIFICATIONS OR A MIN. EVERY 10 VERTICAL FEET.)

CLEANOUT NOTES

- A. CLEANOUT REQUIRED AT ALL R/W OR EASEMENT LINES.
- B. CLEANOUT MATERIALS SHALL BE SCHEDULE 40 GLUED JOINTS OR SDR-35 PVC MATCHING THE LATERAL PIPE SIZE DIAMETER.



CLEANOUT (NON-PAVEMENT AREAS) DETAIL

PUMP CONTROL	ELEVATION
"HIGH LEVEL ALARM"	1020.74
"START LAG PUMP"	1020.74
"START LEAD PUMP"	1020.24
"PUMPS OFF"	1020.10

PUMP CONTROL ELEVATIONS
PER START-UP FLOW CONDITIONS
OF 4,000 GPD

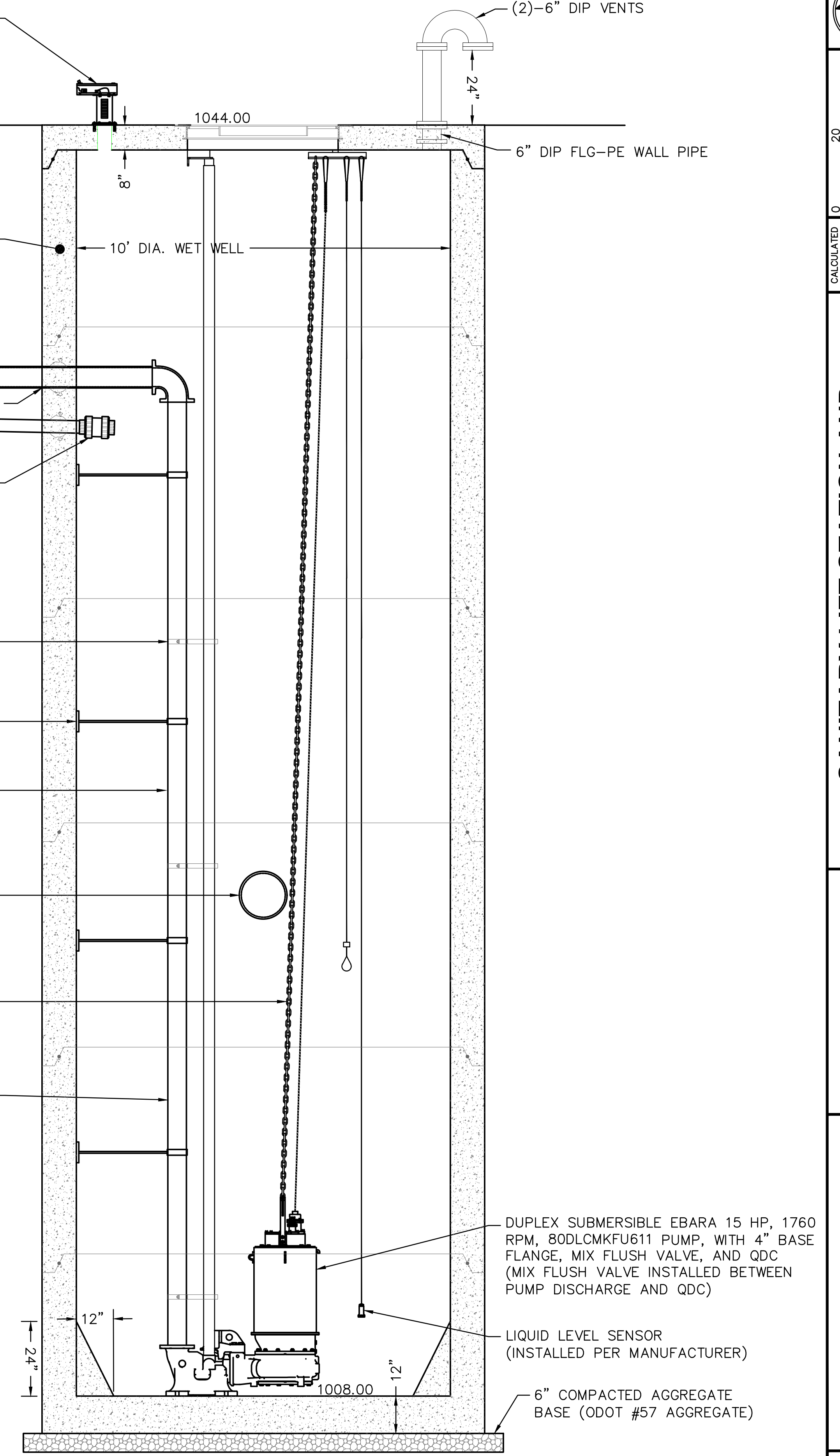
PUMP CONTROL	ELEVATION
"HIGH LEVEL ALARM"	1018.33
"START LAG PUMP"	1018.33
"START LEAD PUMP"	1017.83
"PUMPS OFF"	1011.50

PUMP CONTROL ELEVATIONS
PER FUTURE FLOW CONDITIONS OF
2,100,000 GPD

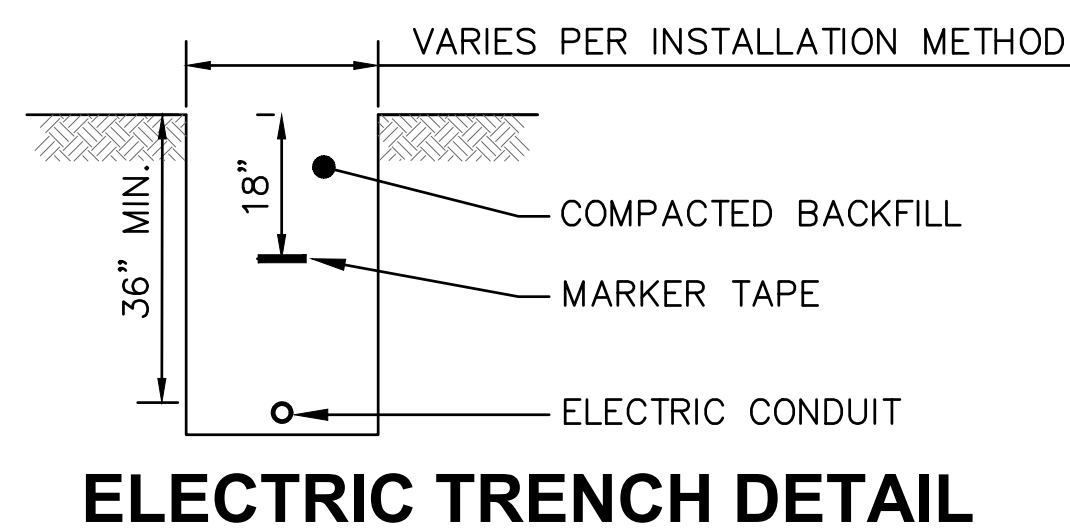
15" PVC SDR-26
(INVERT 1020.81)

STAINLESS STEEL
LIFTING CHAIN

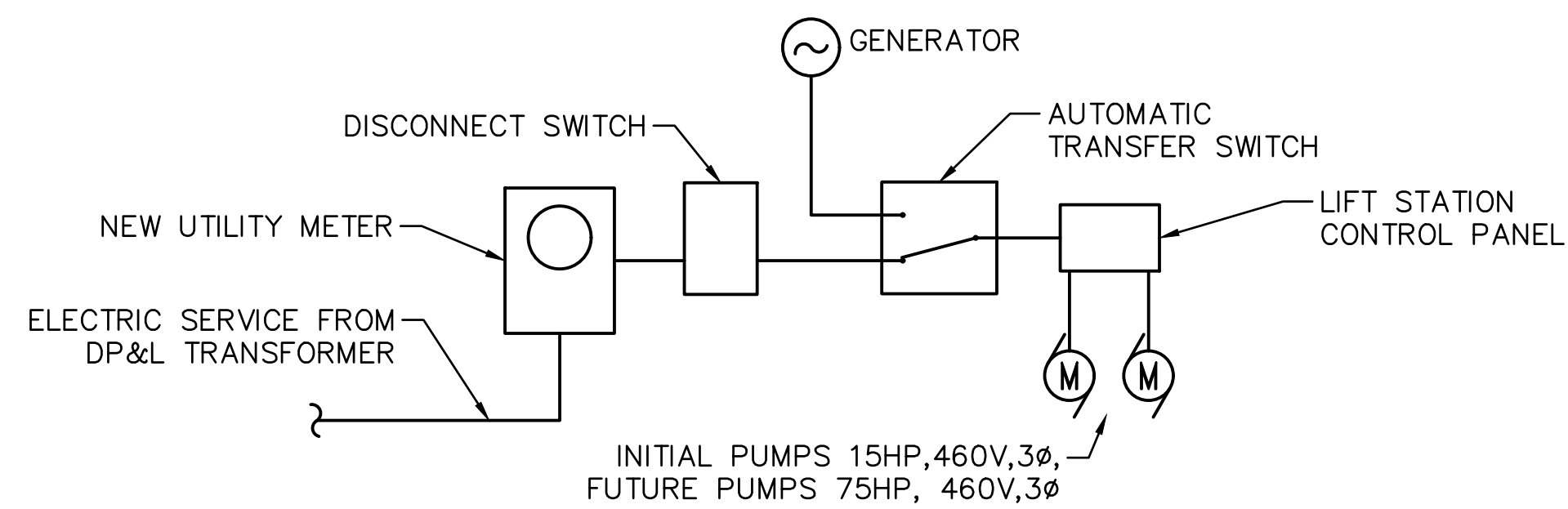
4" DIP CL-53 DISCHARGE PIPE



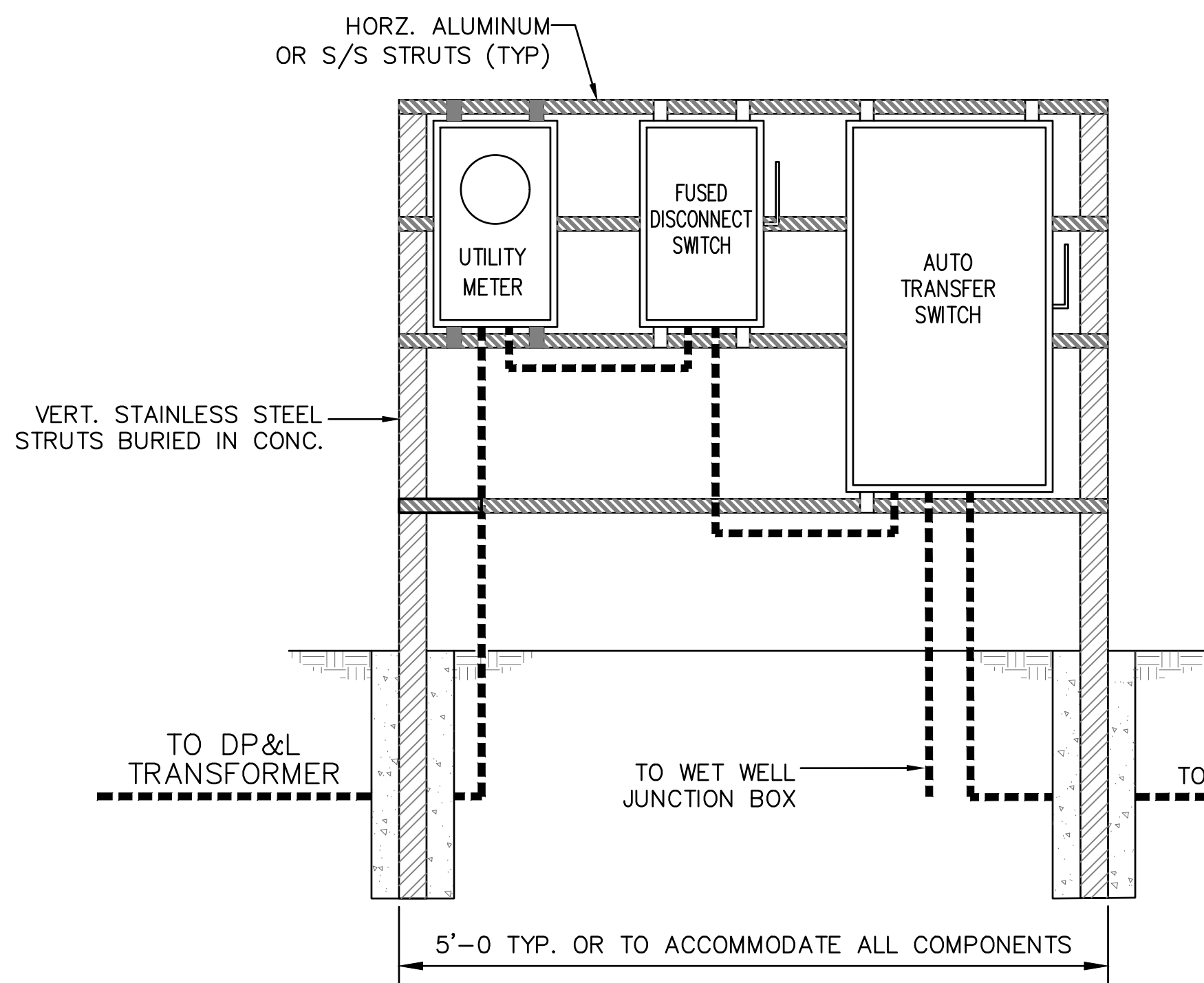
SANITARY LIFT STATION SECTION A-A



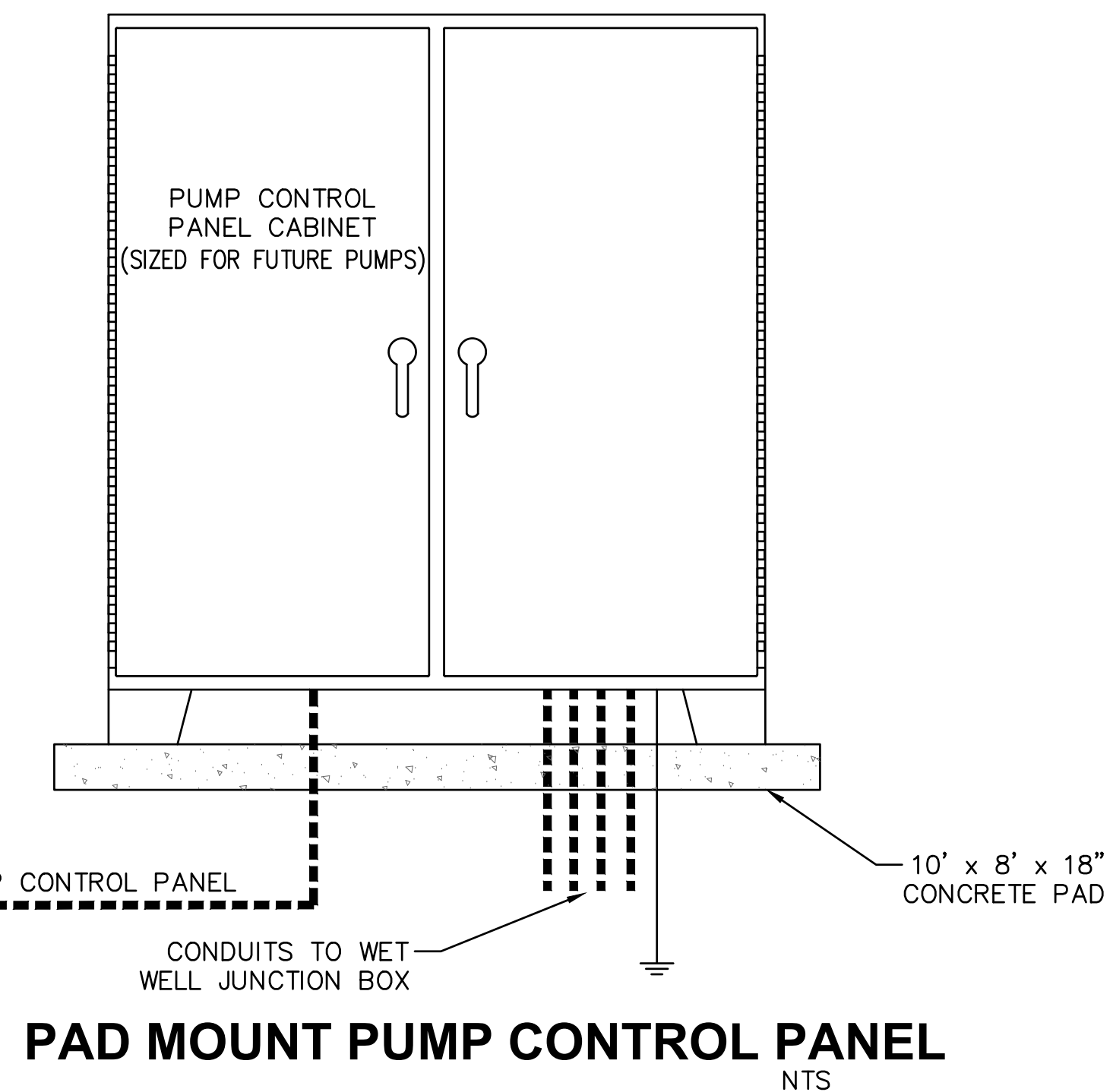
ELECTRIC TRENCH DETAIL



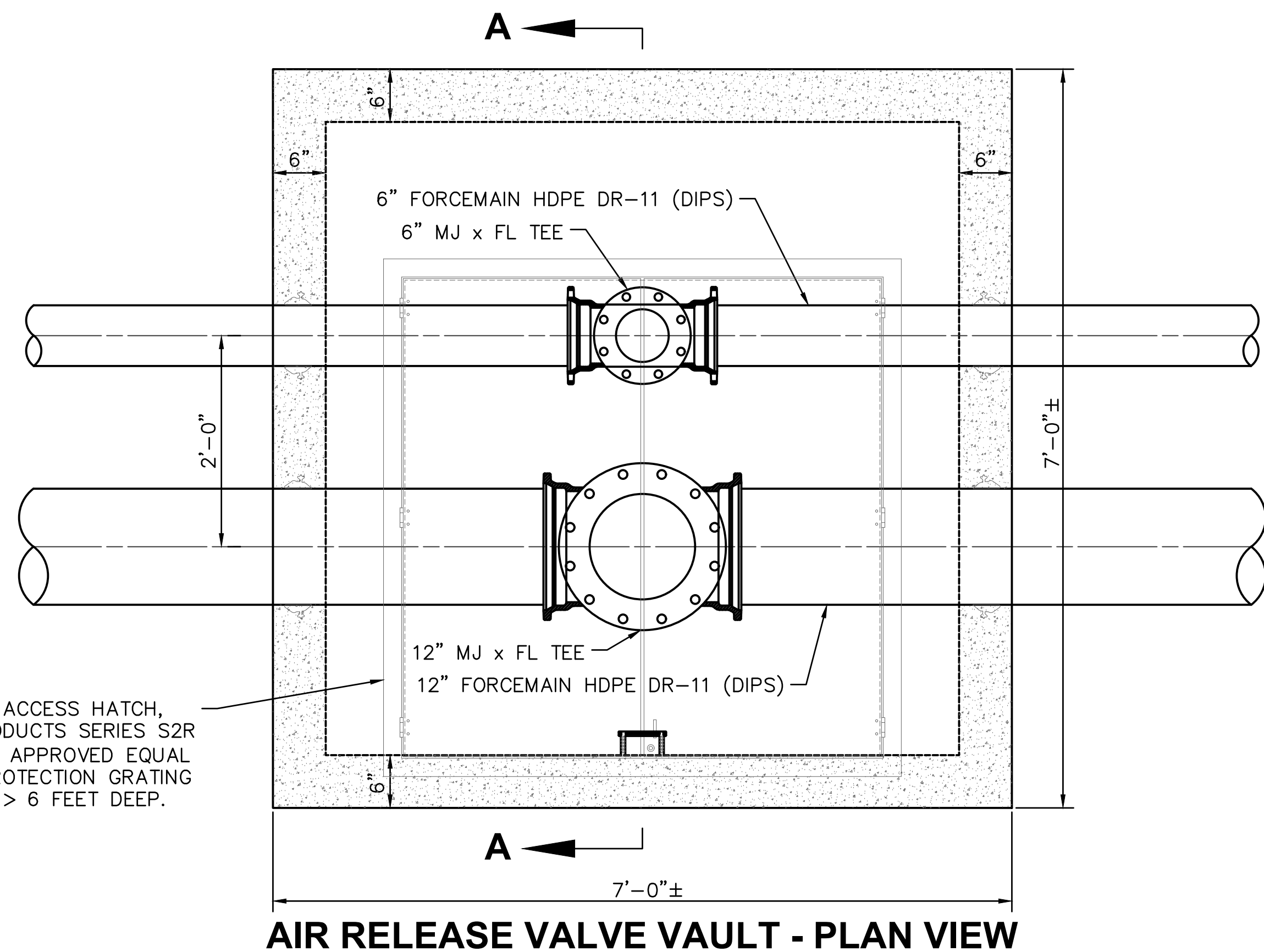
ELECTRICAL SINGLE LINE DIAGRAM



LIFT STATION CONTROL PANEL RACK LAYOUT
NTS

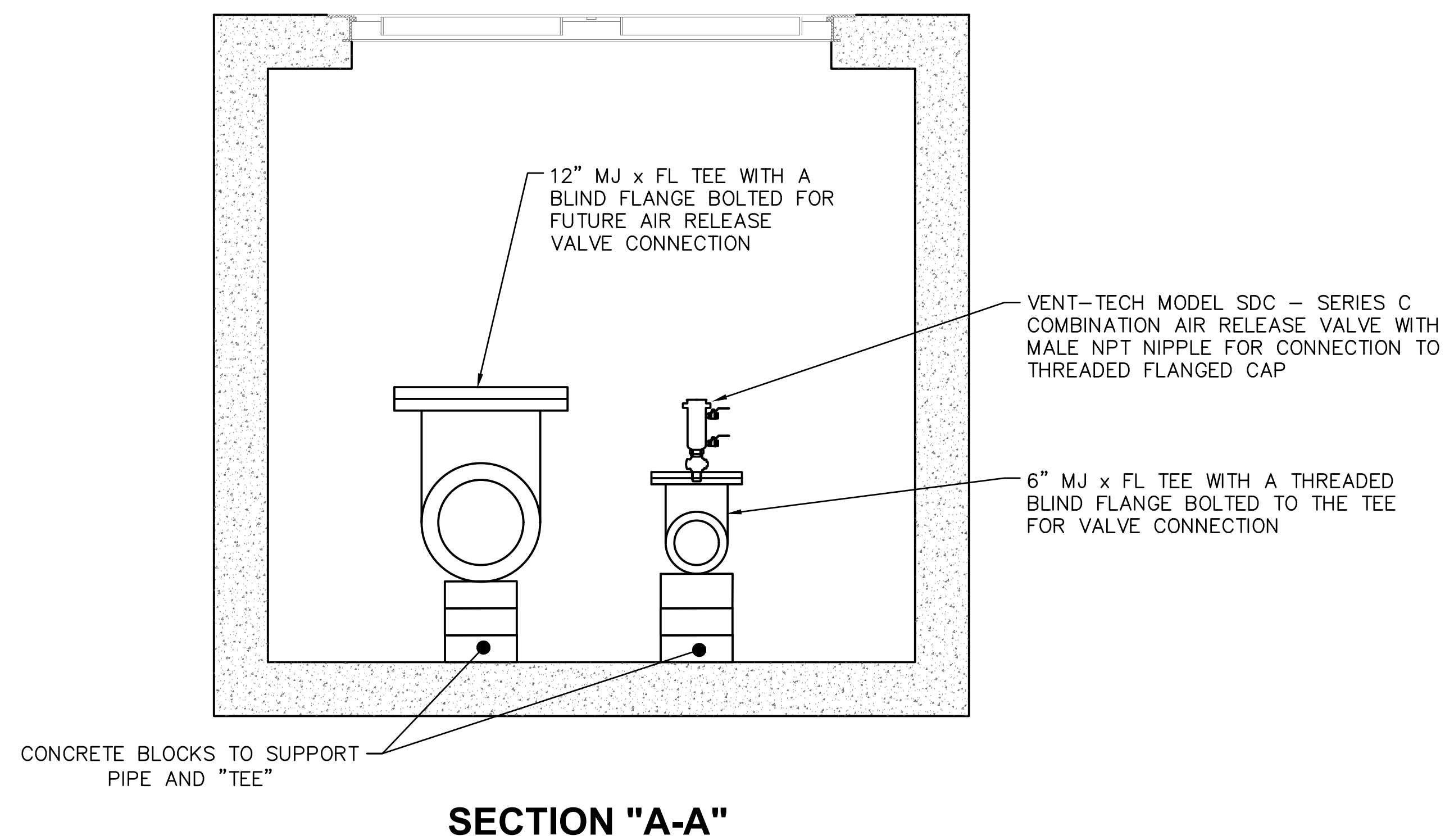


PAD MOUNT PUMP CONTROL PANEL
NTS

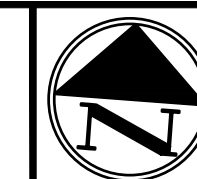


AIR RELEASE VALVE VAULT - PLAN VIEW

AT THE FOLLOWING LOCATIONS:
STATION 87+50
STATION 97+00
STATION 112+50



SECTION "A-A"



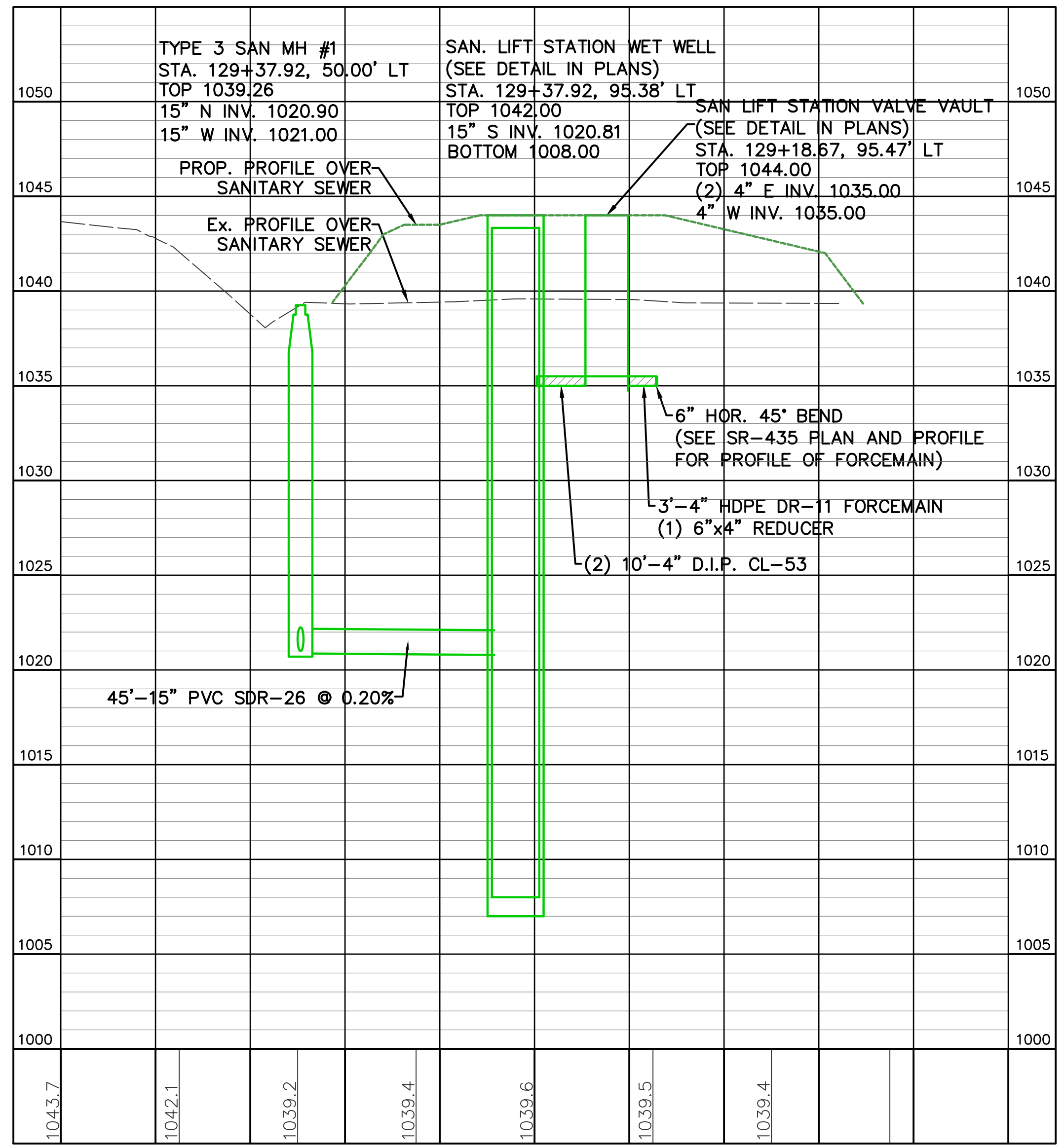
CALCULATED
JLB
CHECKED
NNS

SANITARY LIFT STATION AND FORCEMAIN DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

SCALE IN FEET

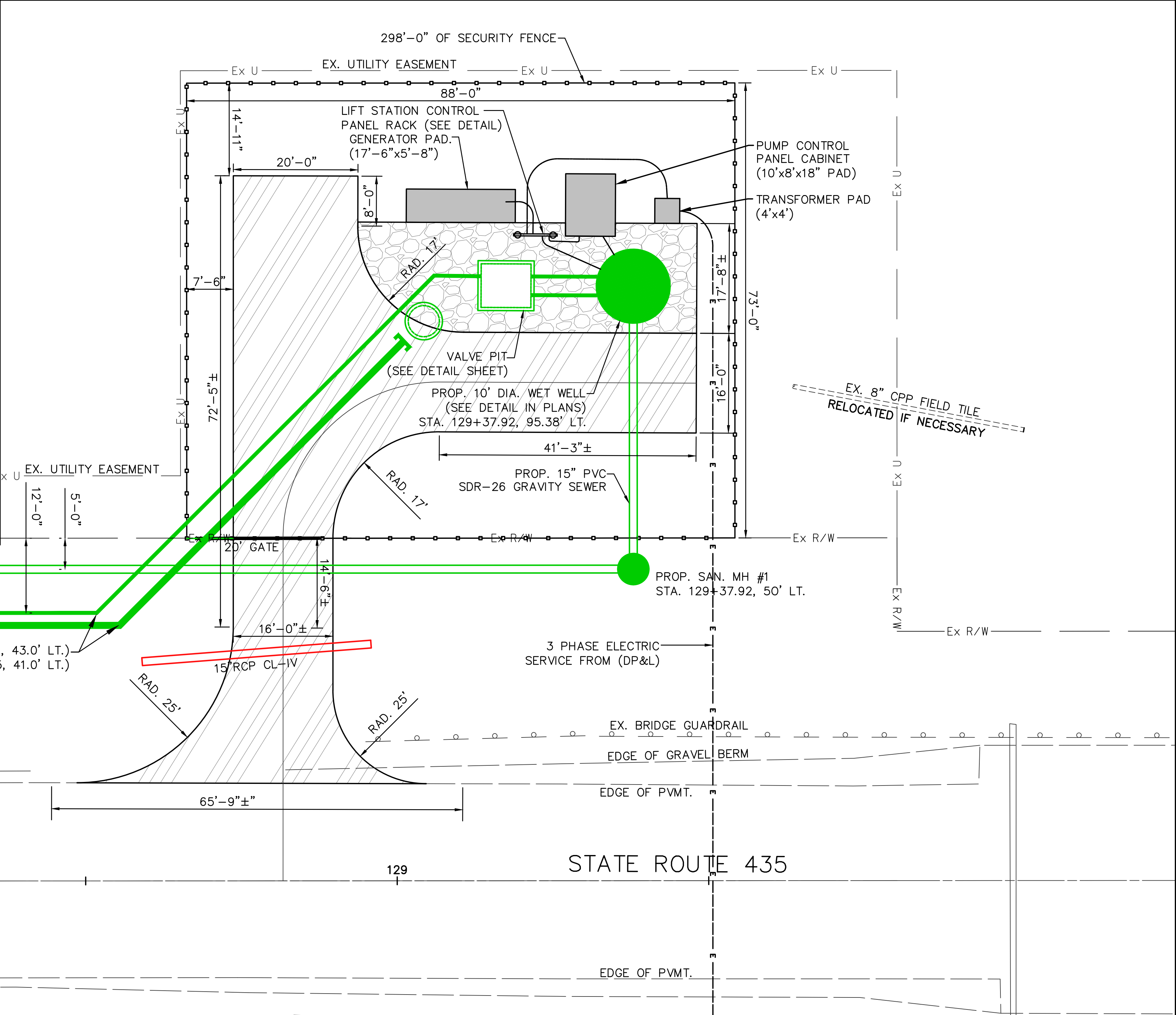


LIFT STATION SITE SAN. SEWER PROFILE

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

HATCH LEGEND

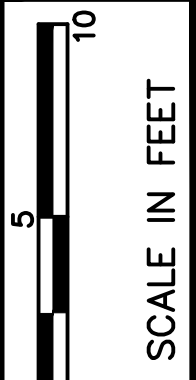
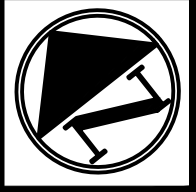
- PUMP STATION ACCESS DRIVE
 - ITEM 204 - SUBGRADE COMPACTION
 - ITEM 304 - 18" AGGREGATE BASE
- PUMP STATION AREA SURFACE
 - ITEM 204 - SUBGRADE COMPACTION
 - ITEM 304 - 8" AGGREGATE BASE



LIFT STATION SITE AND DIMENSIONING PLAN

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



CALCULATED
JLB
CHECKED
NNS

LIFT STATION GRADING PLAN

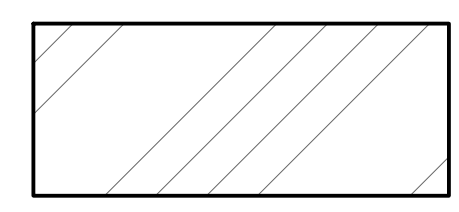
APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

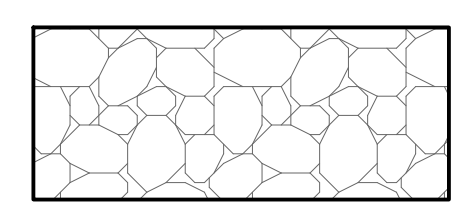
LEGEND

- P - PROPOSED PAVEMENT ELEVATIONS
- PD - PROPOSED CONCRETE PAD ELEVATIONS
- EP - EXISTING PAVEMENT ELEVATIONS
- INV - PROPOSED PIPE INVERT ELEVATION
- TOP - PROPOSED STRUCTURE TOP ELEVATION

HATCH LEGEND

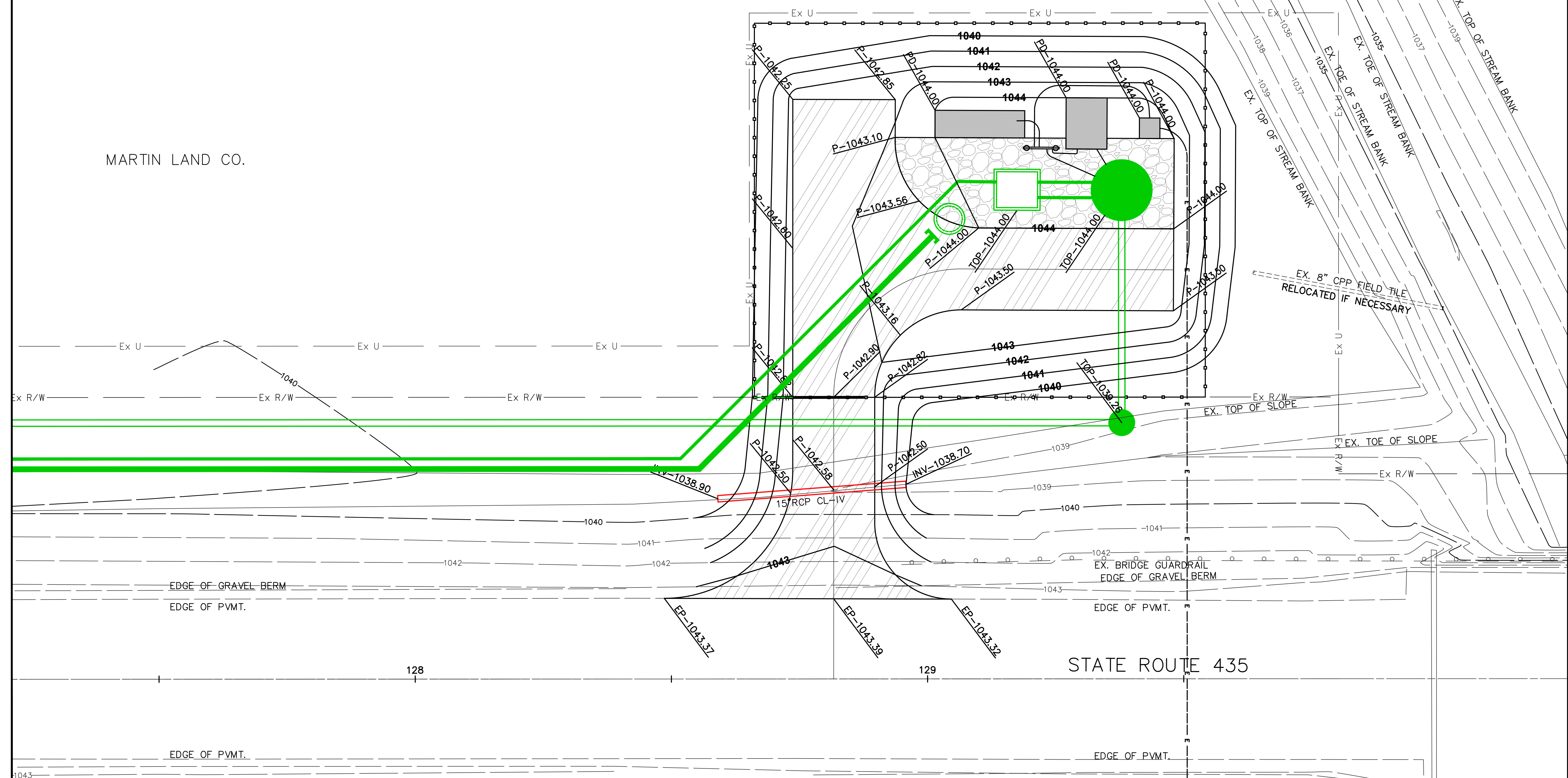


- PUMP STATION ACCESS DRIVE**
- ITEM 204 - SUBGRADE COMPACTION
 - ITEM 304 - 18" AGGREGATE BASE



- PUMP STATION AREA SURFACE**
- ITEM 204 - SUBGRADE COMPACTION
 - ITEM 304 - 8" AGGREGATE BASE

MARTIN LAND CO.

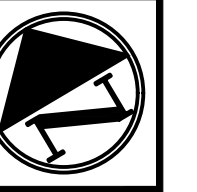
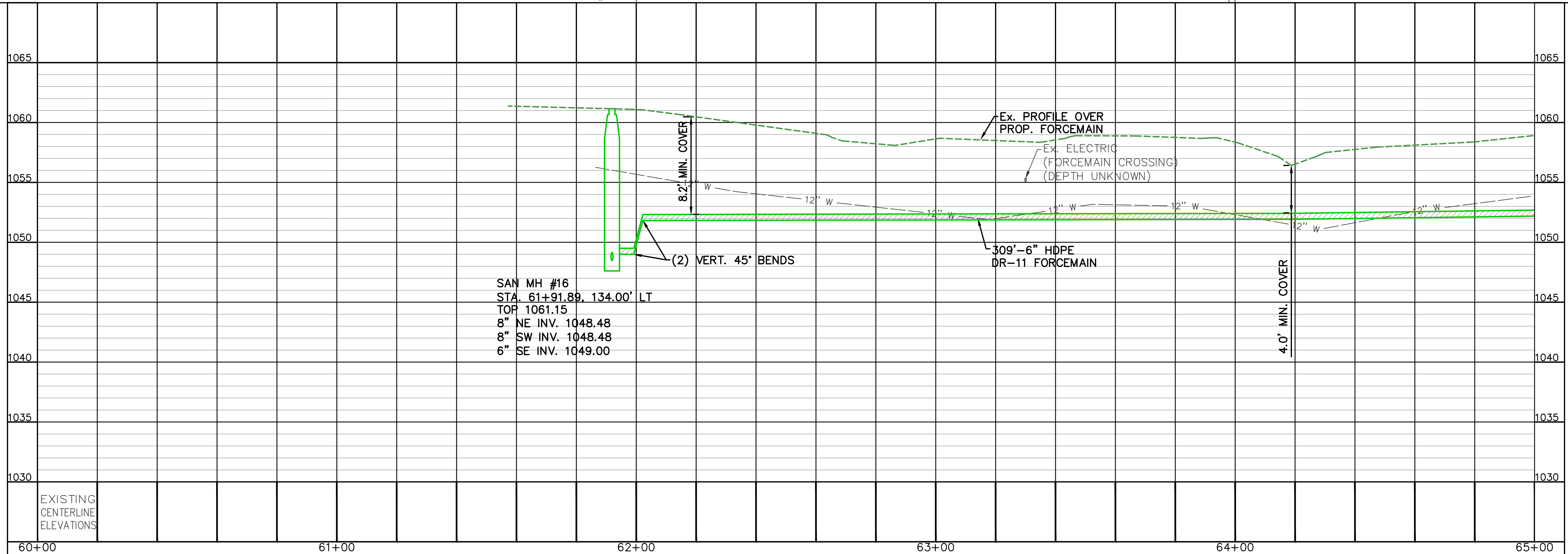
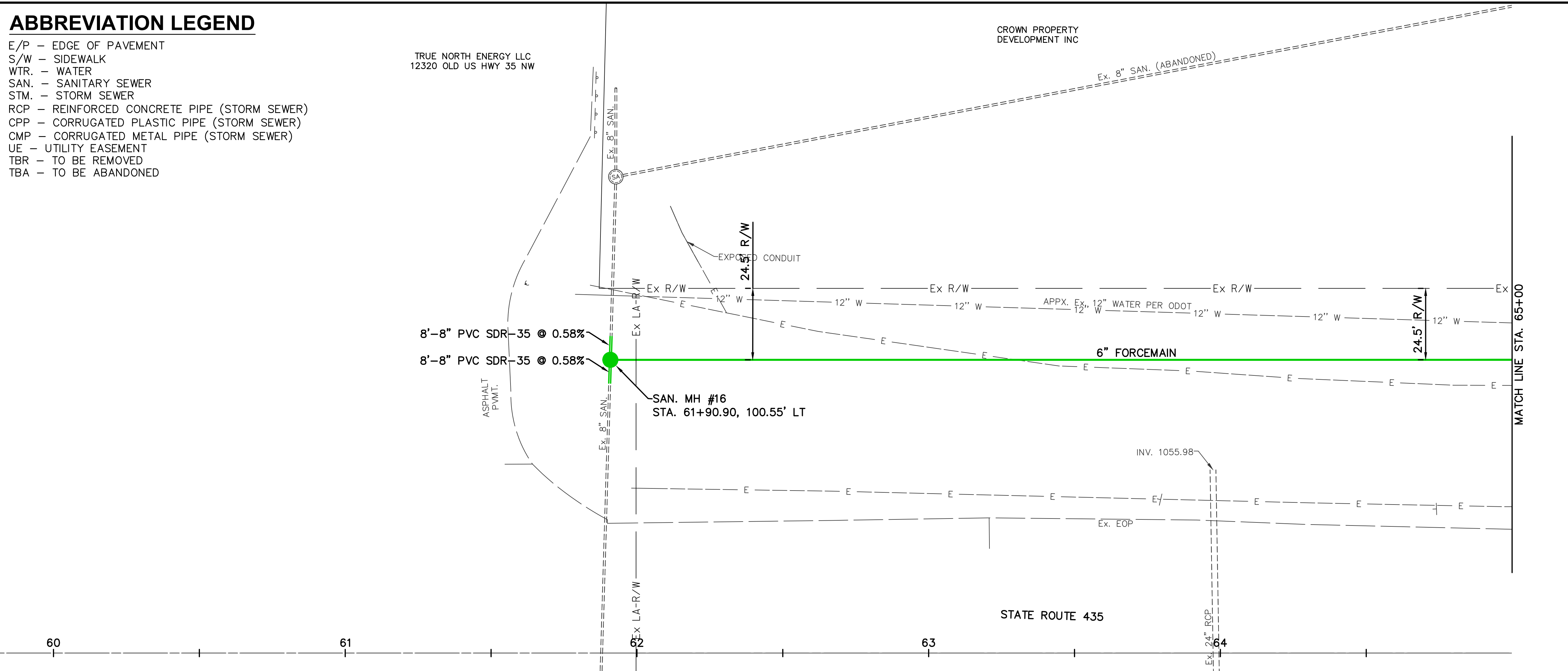


ABBREVIATION LEGEND

- E/P - EDGE OF PAVEMENT
- S/W - SIDEWALK
- WTR. - WATER
- SAN. - SANITARY SEWER
- STM. - STORM SEWER
- RCP - REINFORCED CONCRETE PIPE (STORM SEWER)
- CPP - CORRUGATED PLASTIC PIPE (STORM SEWER)
- CMP - CORRUGATED METAL PIPE (STORM SEWER)
- UE - UTILITY EASEMENT
- TBR - TO BE REMOVED
- TBA - TO BE ABANDONED

TRUE NORTH ENERGY LLC
12320 OLD US HWY 35 NW

CROWN PROPERTY
DEVELOPMENT INC



CALCULATED
JLB
CHECKED
NINS

**PLAN AND PROFILE SR 435
STA. 60+00 TO STA. 65+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

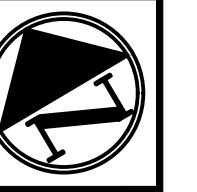
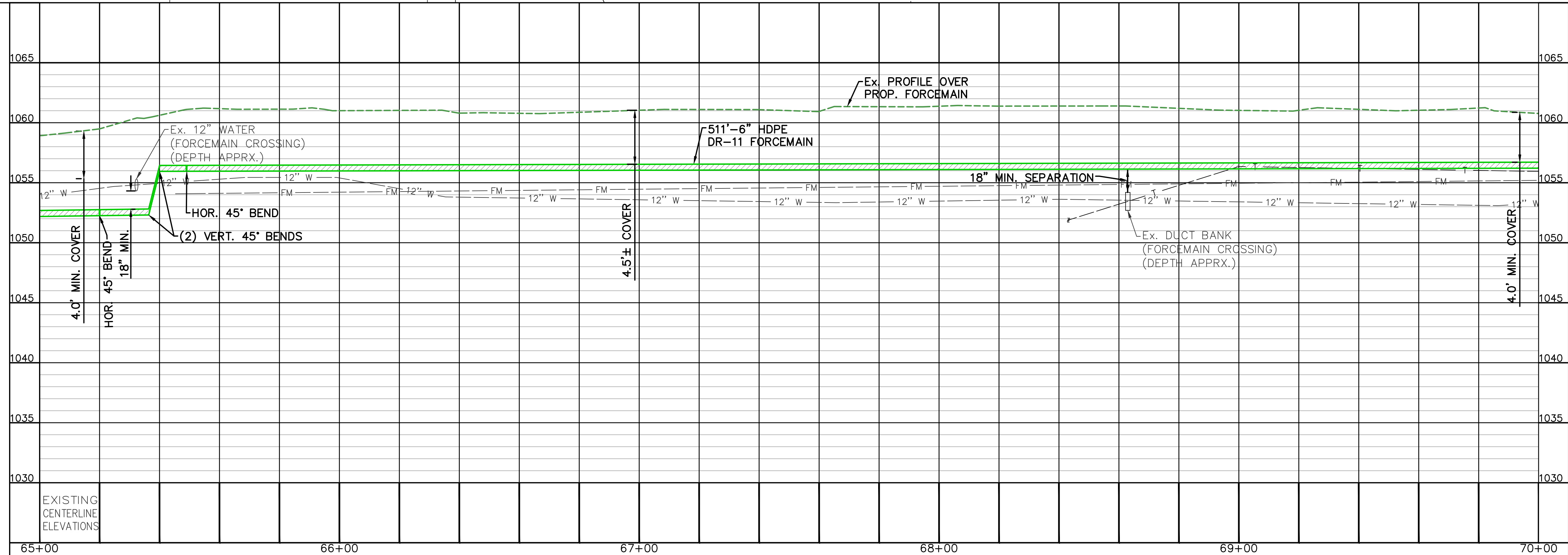
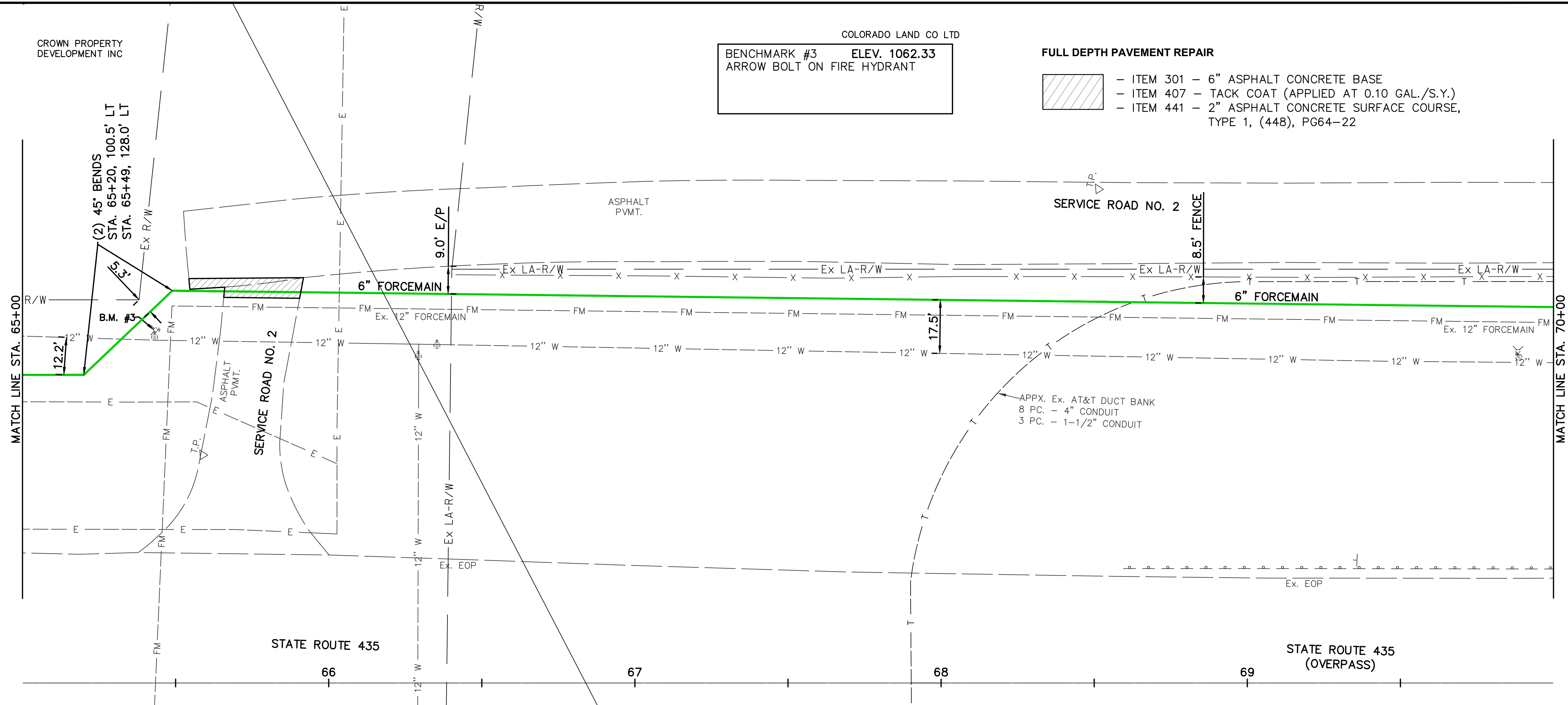
CROWN PROPERTY DEVELOPMENT INC

COLORADO LAND CO LTD

BENCHMARK #3 ELEV. 1062.33
ARROW BOLT ON FIRE HYDRANT

FULL DEPTH PAVEMENT REPAIR

- ITEM 301 - 6" ASPHALT CONCRETE BASE
- ITEM 407 - TACK COAT (APPLIED AT 0.10 GAL./S.Y.)
- ITEM 441 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22

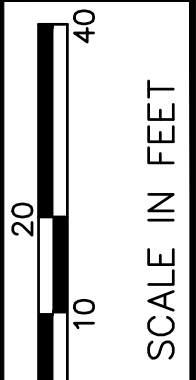
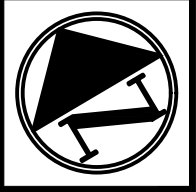
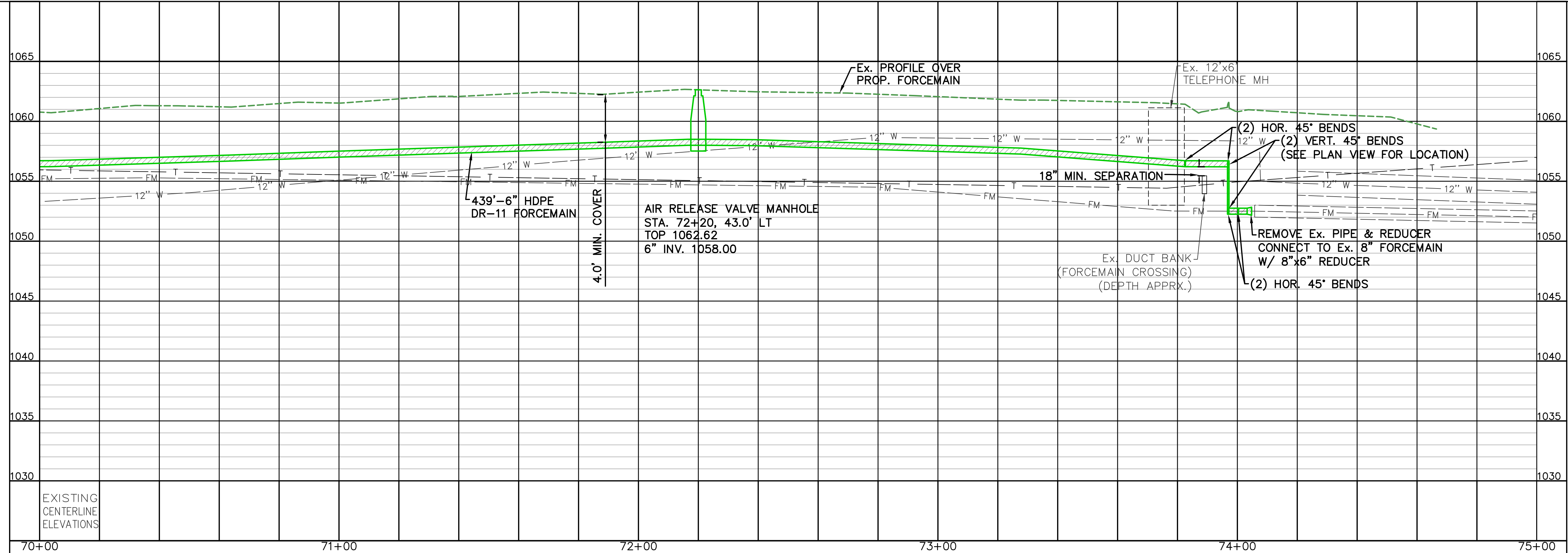
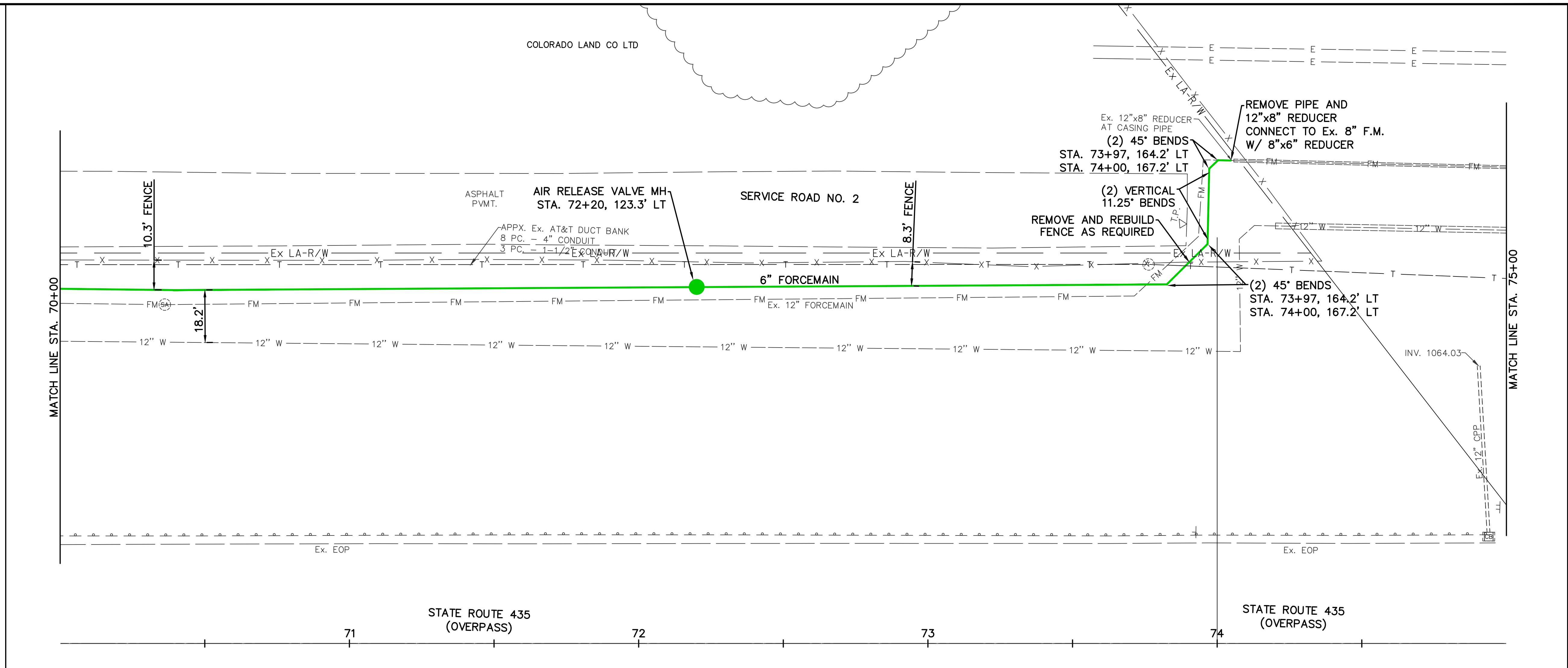


CALCULATED JLB
CHECKED NINS

**PLAN AND PROFILE SR 435
STA. 65+00 TO STA. 70+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

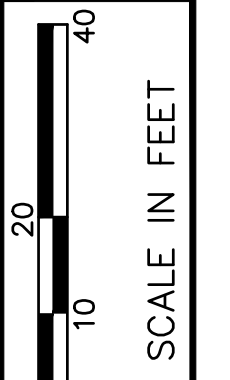
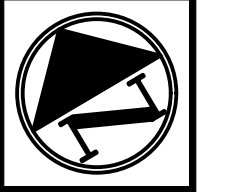
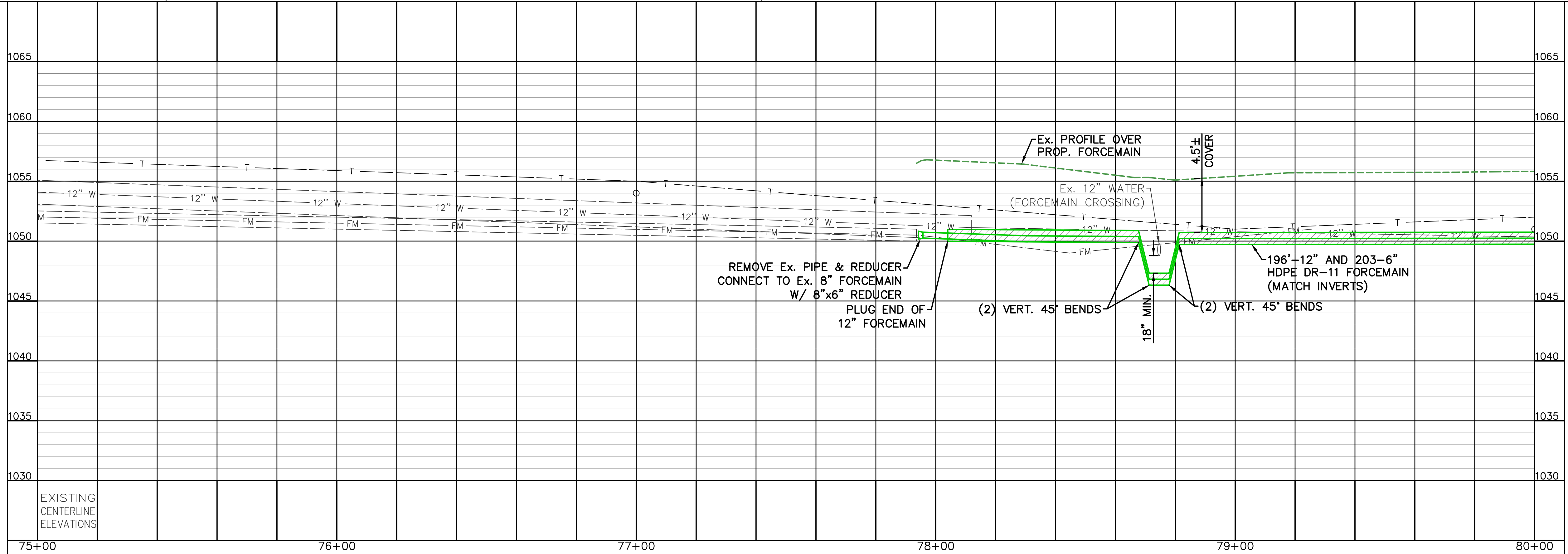
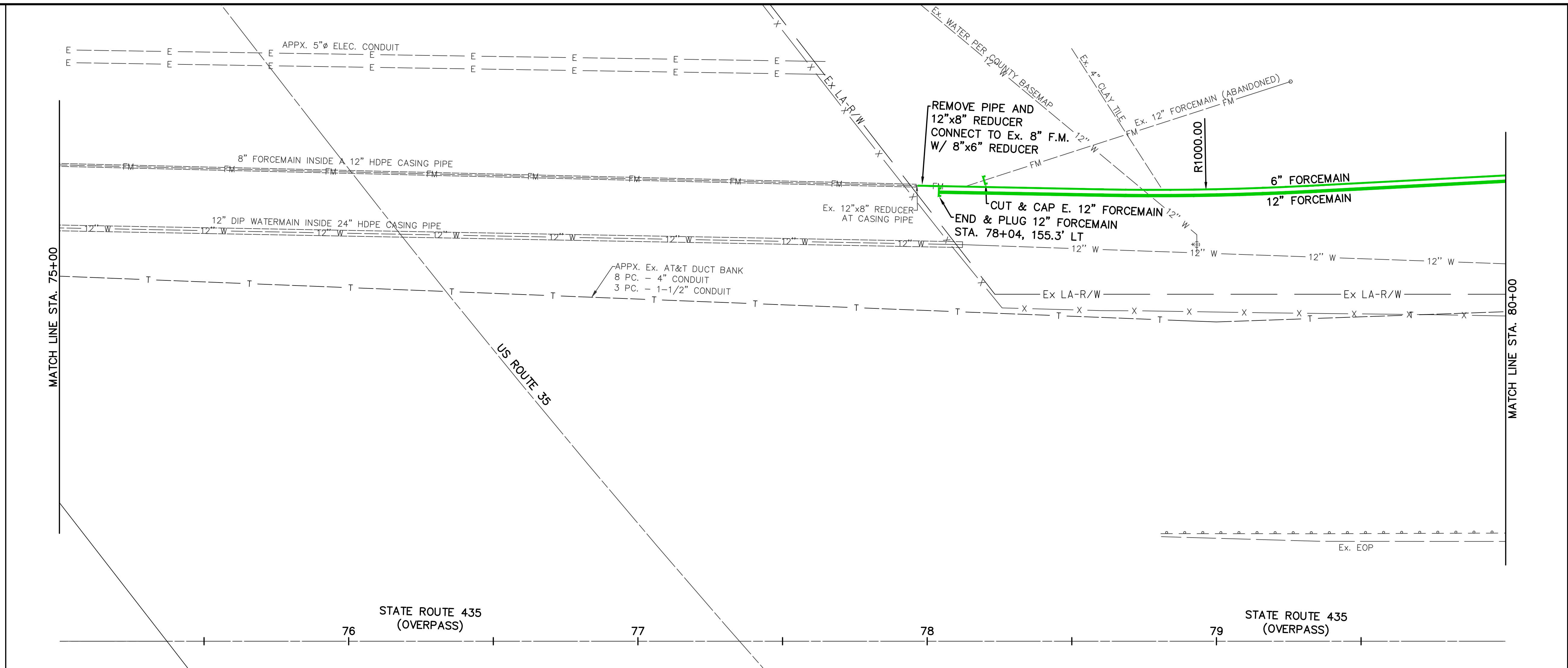


CALCULATED
JLB
CHECKED
NINS

**PLAN AND PROFILE SR 435
STA. 70+00 TO STA. 75+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

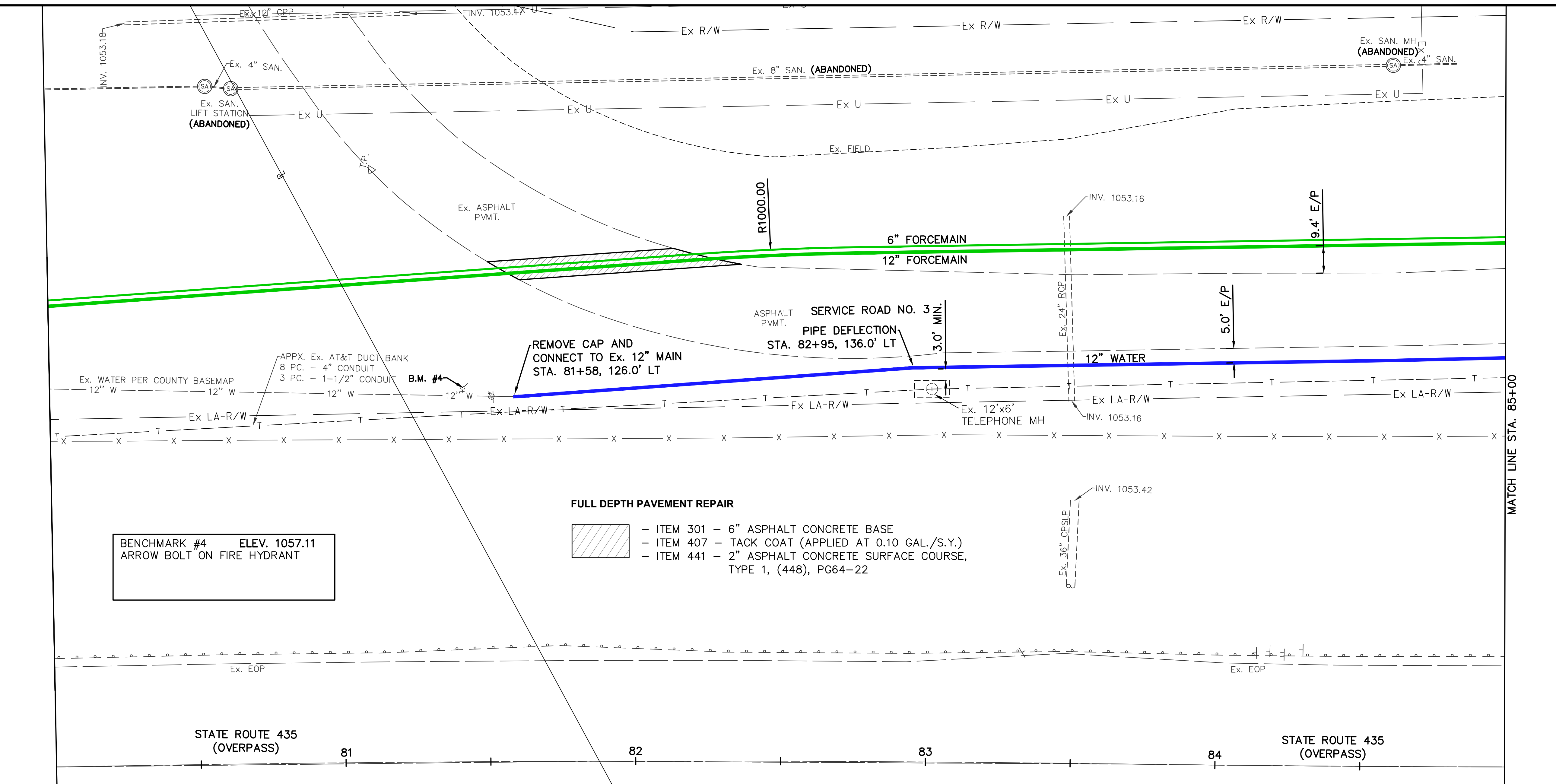


CALCULATED
JLB
CHECKED
NINS

**PLAN AND PROFILE SR 435
STA. 75+00 TO STA. 80+00**

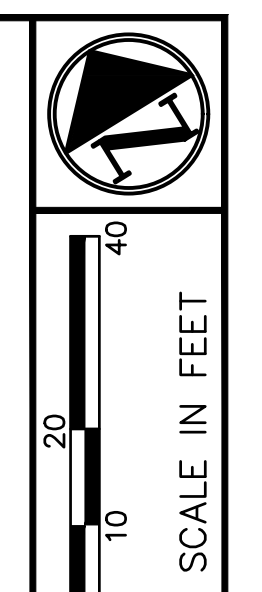
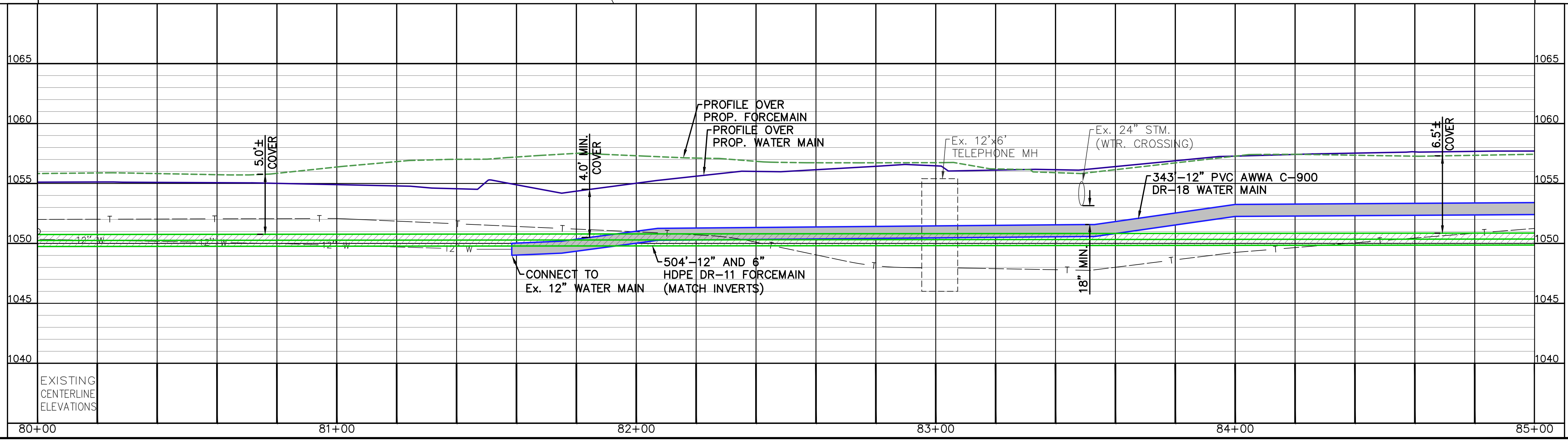
APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



BENCHMARK #4 ELEV. 1057.11
ARROW BOLT ON FIRE HYDRANT

- FULL DEPTH PAVEMENT REPAIR**
- ITEM 301 - 6" ASPHALT CONCRETE BASE
 - ITEM 407 - TACK COAT (APPLIED AT 0.10 GAL./S.Y.)
 - ITEM 441 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22

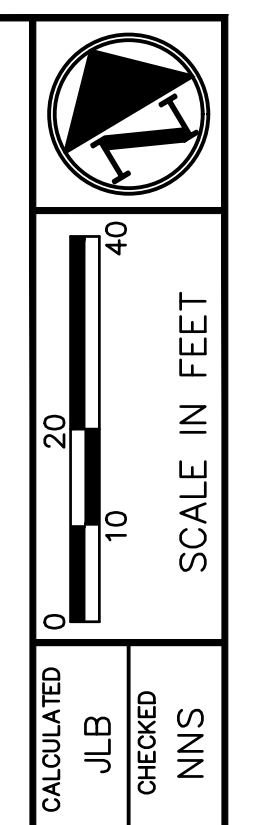
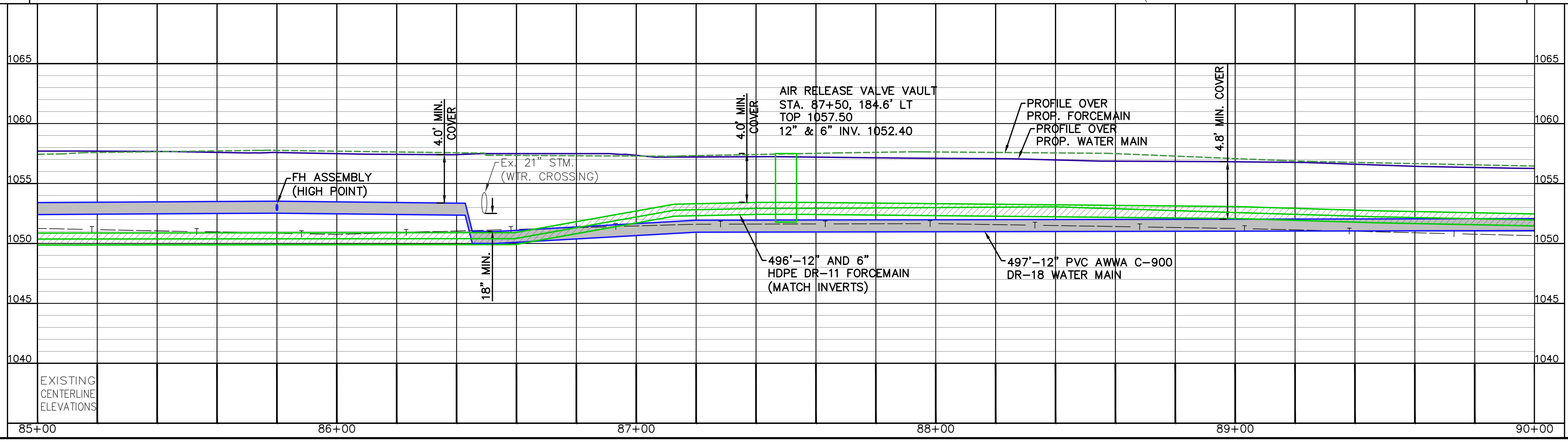
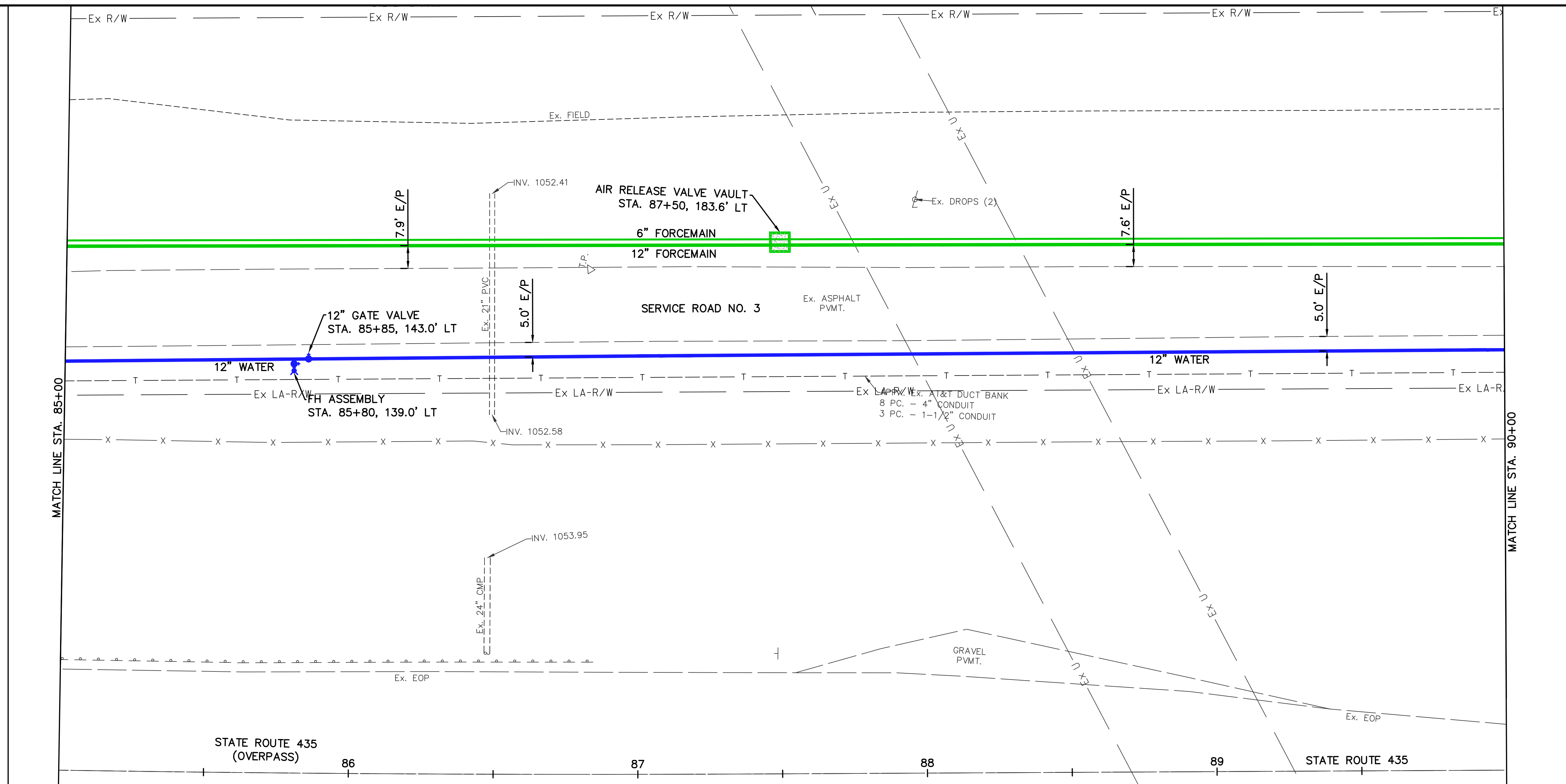


CALCULATED JLB
CHECKED NINS

**PLAN AND PROFILE SR 435
STA. 80+00 TO STA. 85+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

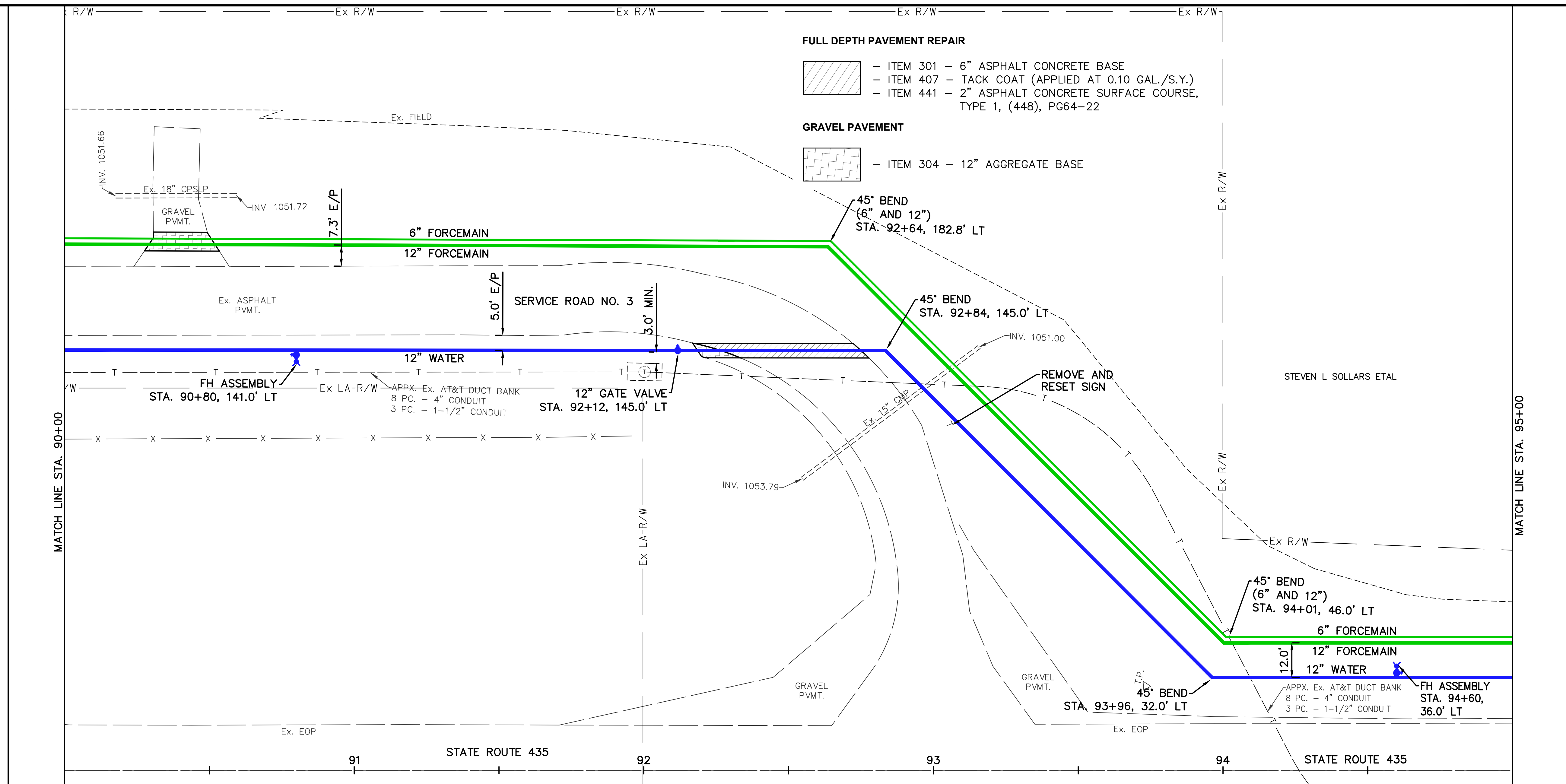


CALCULATED
JLB
CHECKED
NINS

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

**PLAN AND PROFILE SR 435
STA. 85+00 TO STA. 90+00**



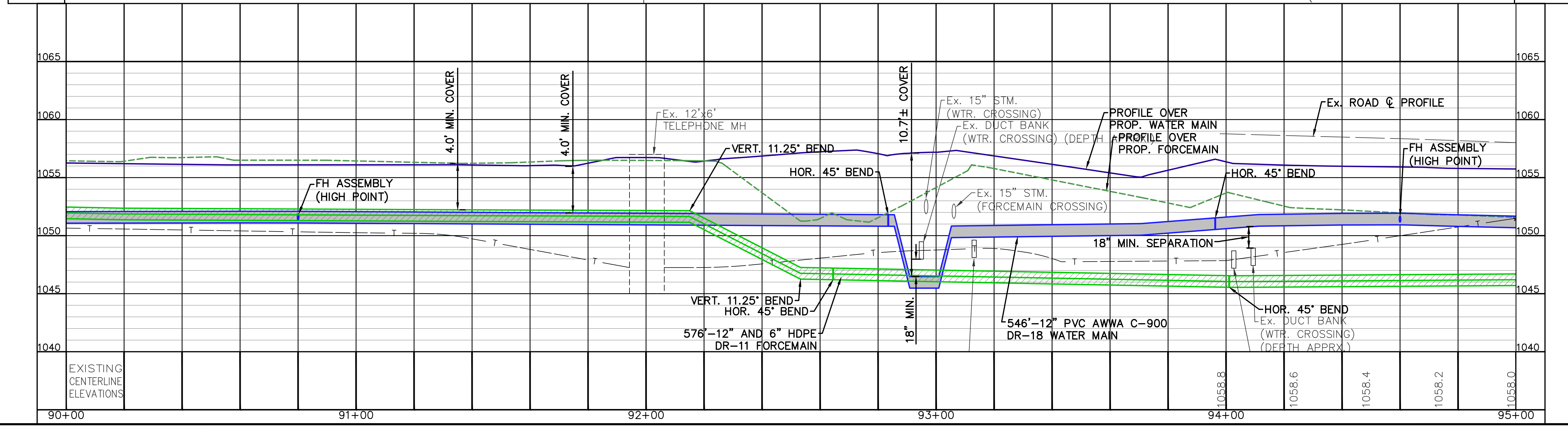
- FULL DEPTH PAVEMENT REPAIR**
- ITEM 301 - 6" ASPHALT CONCRETE BASE
 - ITEM 407 - TACK COAT (APPLIED AT 0.10 GAL./S.Y.)
 - ITEM 441 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
- GRAVEL PAVEMENT**
- ITEM 304 - 12" AGGREGATE BASE

SCALE IN FEET

**PLAN AND PROFILE SR 435
STA. 90+00 TO STA. 95+00**

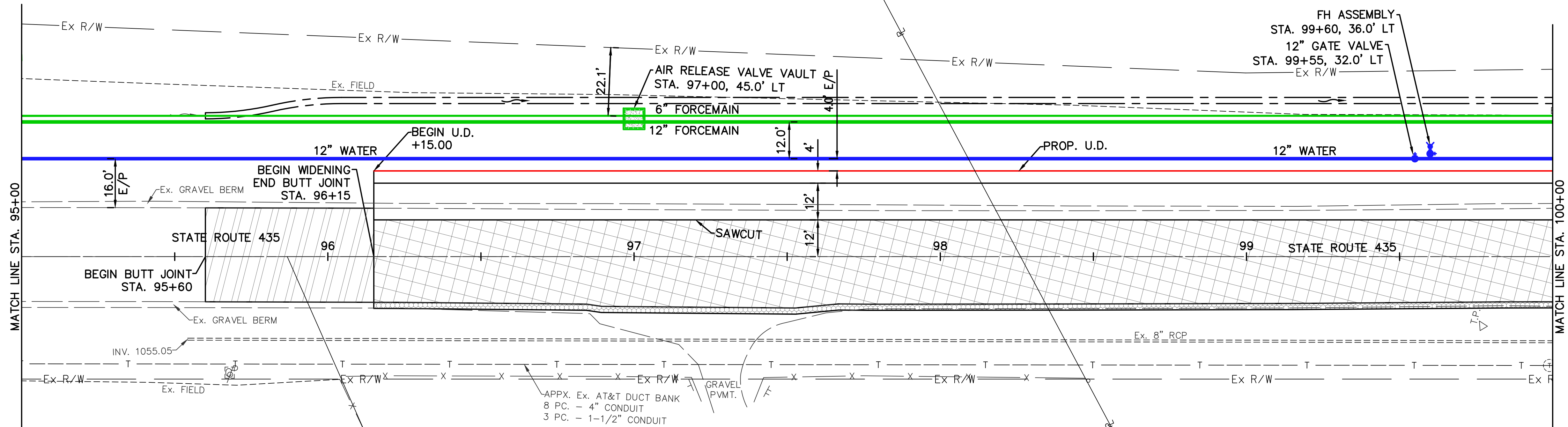
APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



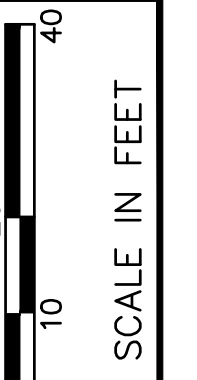
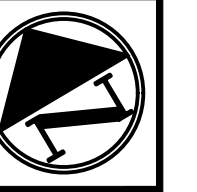
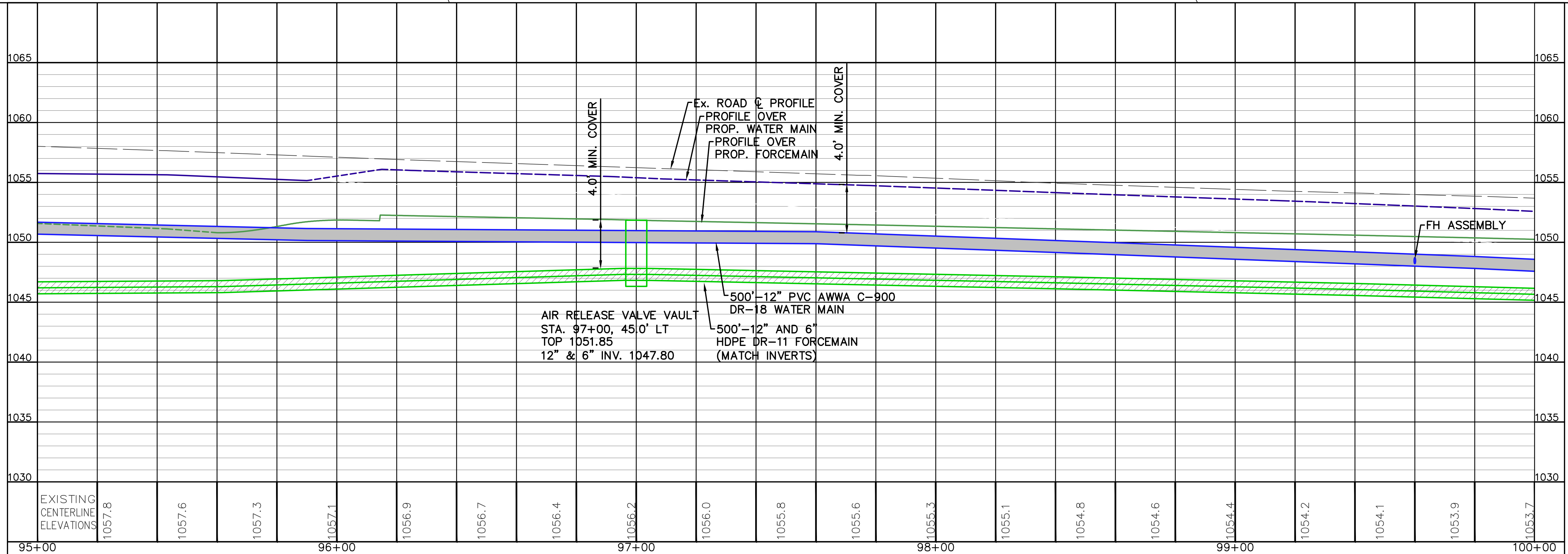
STEVEN L SOLLARS ETAL

STEVEN L SOLLARS ETAL



PAVEMENT OVERLAY

- ITEM 407 - NON-TRACKING TACK COAT, SURFACE COURSE, (APPLIED AT 0.10 GAL./S.Y.)
- ITEM 441 - 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22



CALCULATED
JLB
CHECKED
NINS

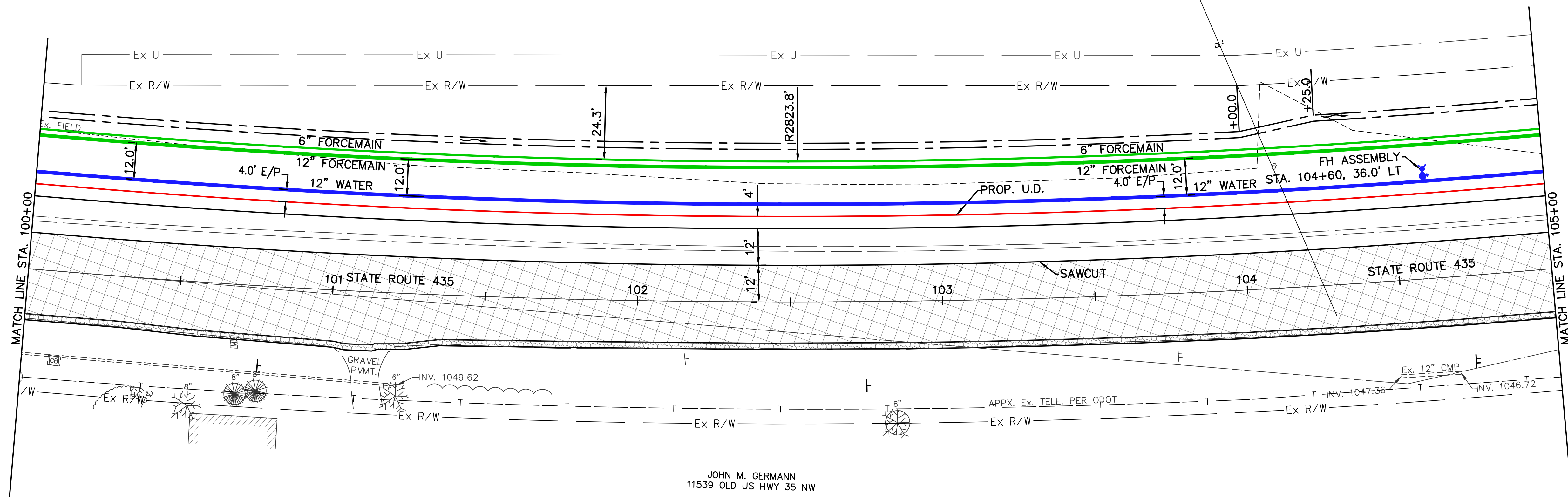
**PLAN AND PROFILE SR 435
STA. 95+00 TO STA. 100+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

STEVEN L SOLLARS ETAL

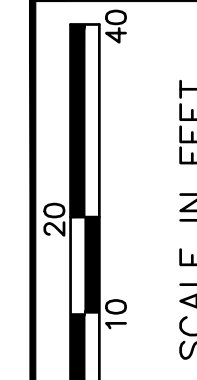
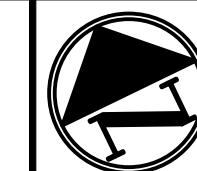
MARTIN LAND CO.



PAVEMENT OVERLAY

- ITEM 407 - NON-TRACKING TACK COAT, SURFACE COURSE, (APPLIED AT 0.10 GAL./S.Y.)
- ITEM 441 - 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22

JOHN M. GERMANN
11539 OLD US HWY 35 NW

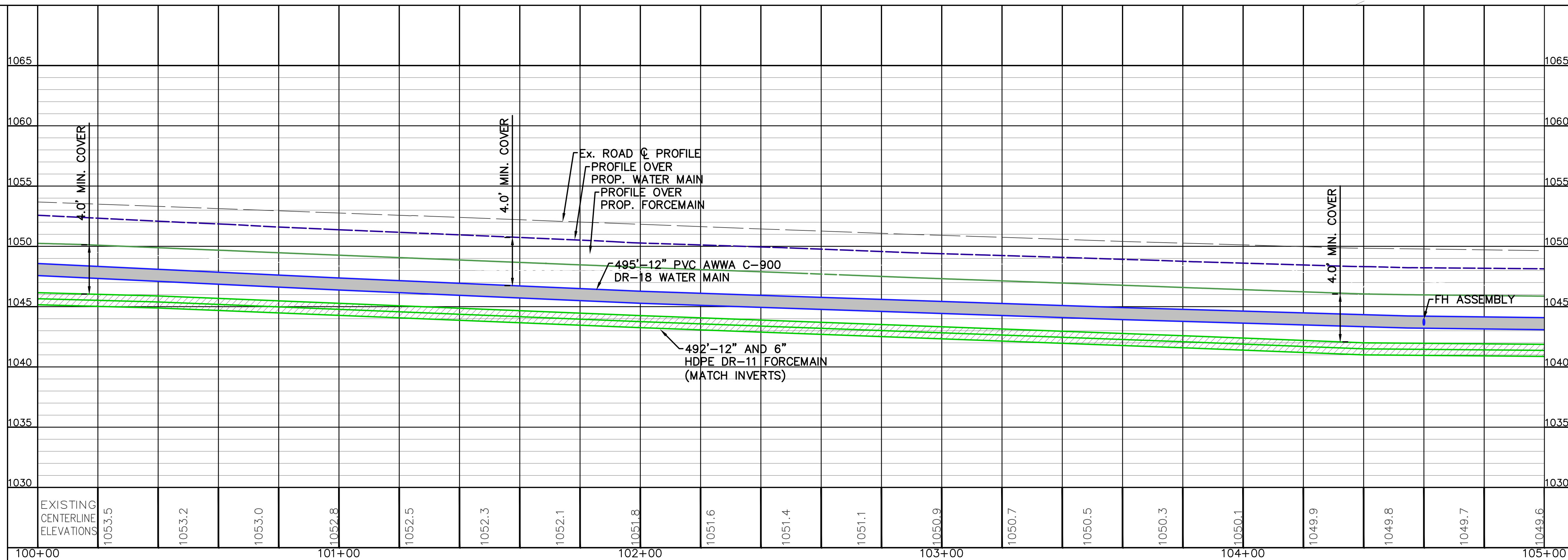


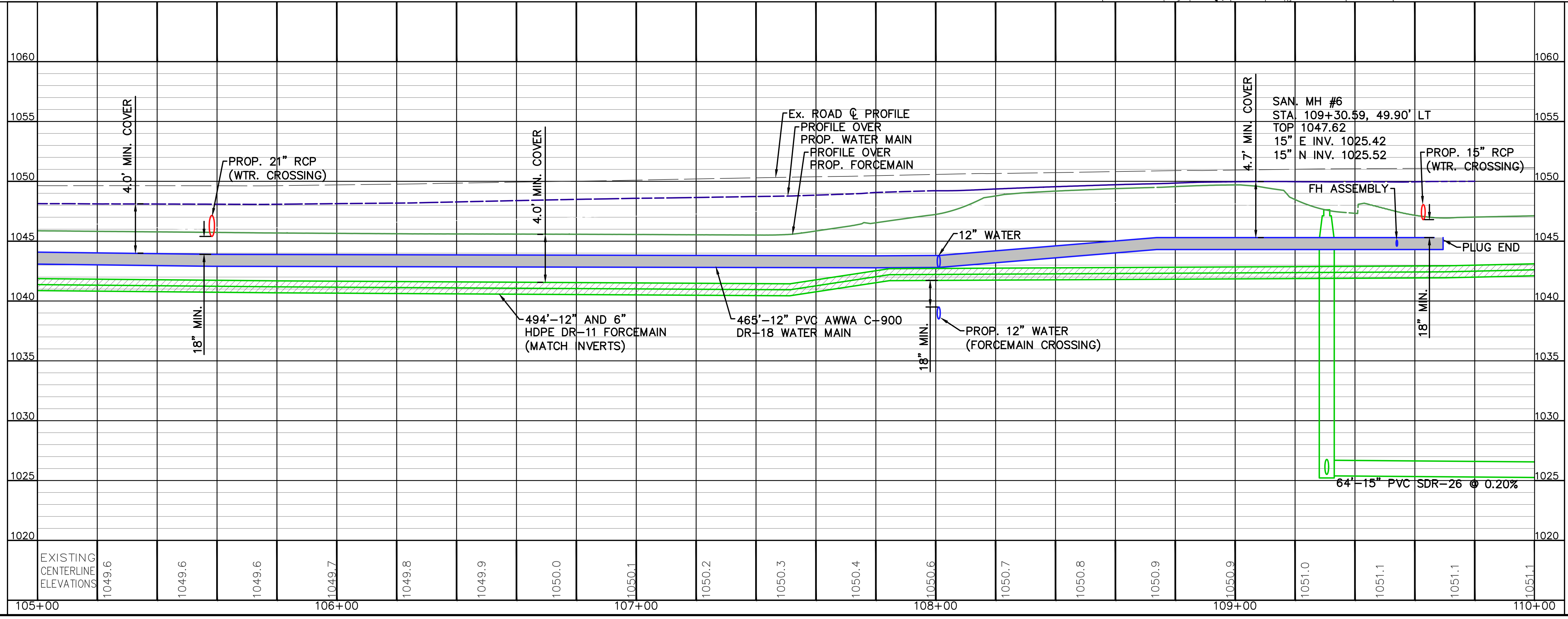
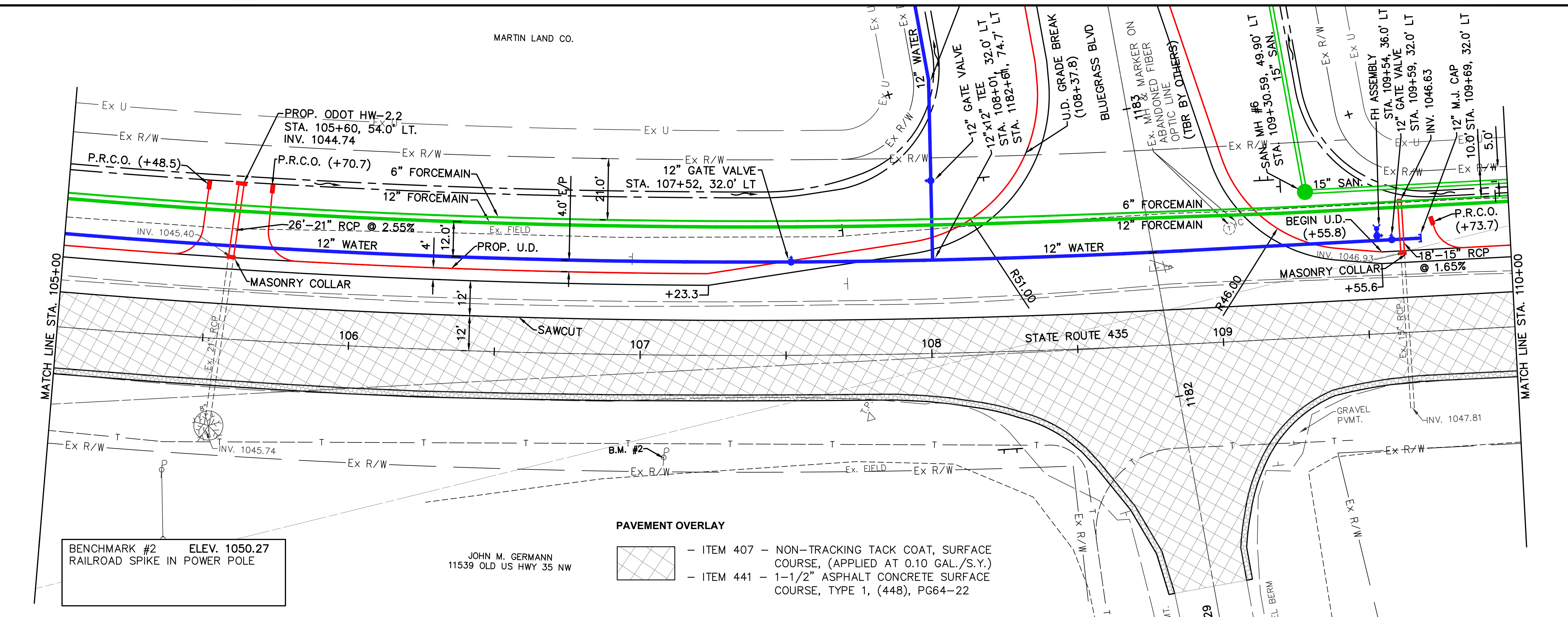
CALCULATED JLB
CHECKED NINS

**PLAN AND PROFILE SR 435
STA. 100+00 TO STA. 105+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1





SCALE IN FEET

0 10 20 40

CALCULATED JLB

CHECKED NINS

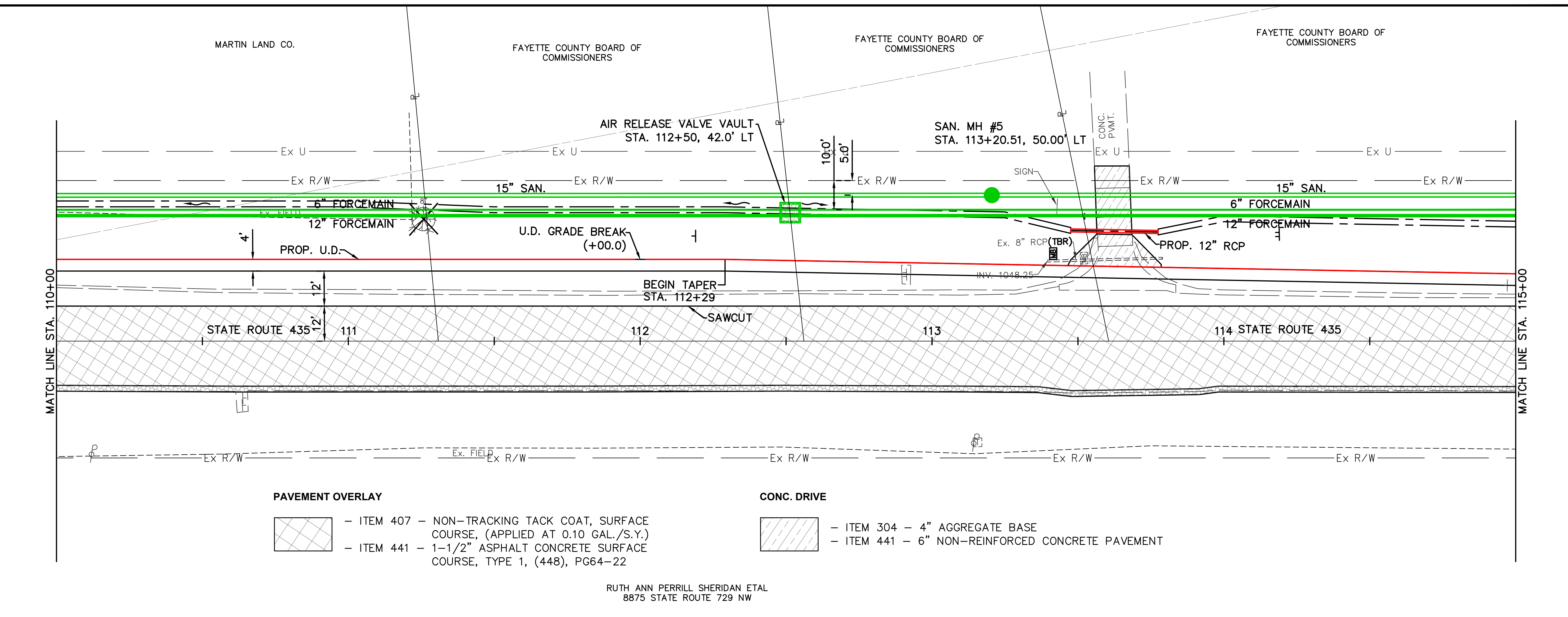
APPROVED FOR CONSTRUCTION 7-02-2020

BLUEGRASS BLVD, PHASE 1

29

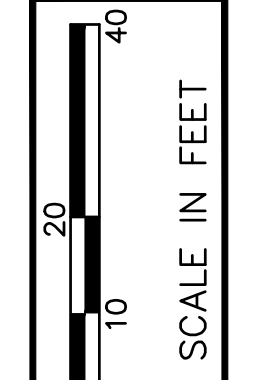
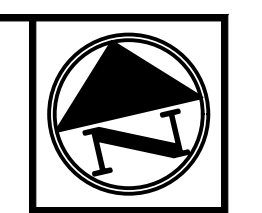
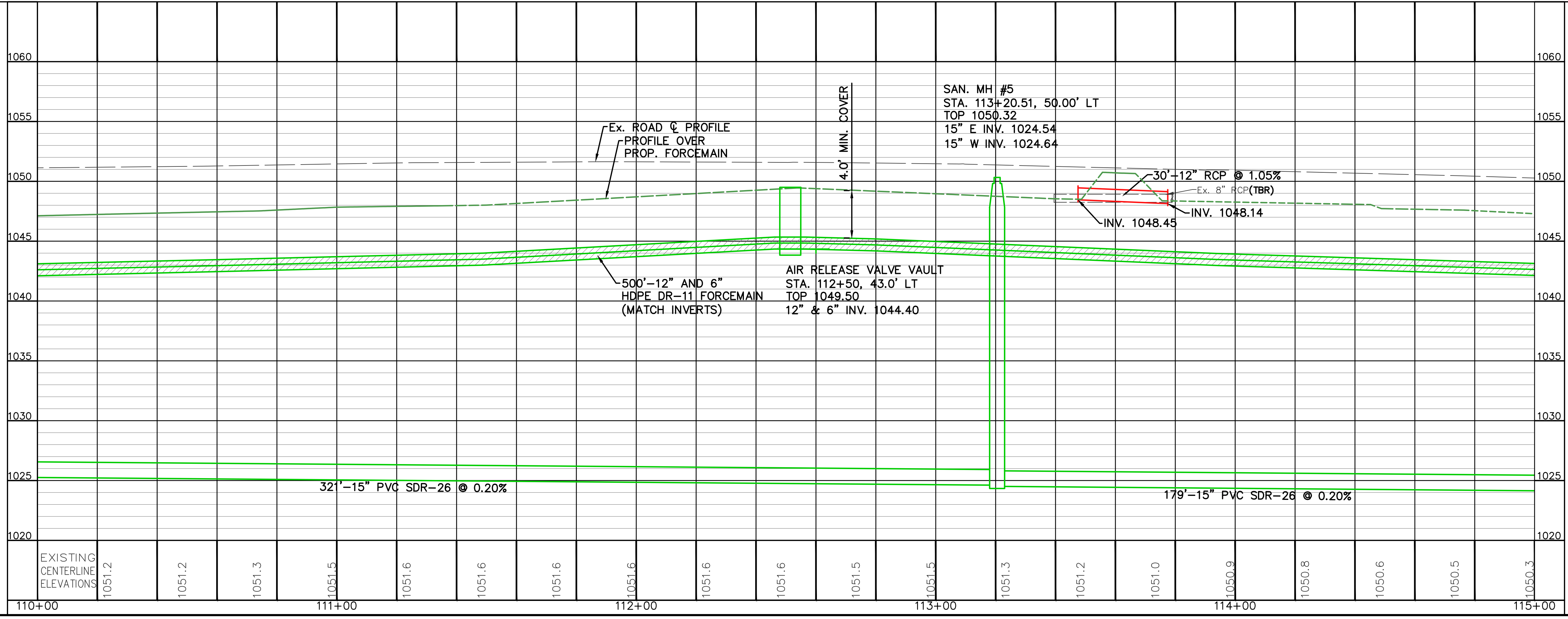
77

PLAN AND PROFILE SR 435
STA. 105+00 TO STA. 110+00



- PAVEMENT OVERLAY**
- ITEM 407 - NON-TRACKING TACK COAT, SURFACE COURSE, (APPLIED AT 0.10 GAL./S.Y.)
 - ITEM 441 - 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
- CONC. DRIVE**
- ITEM 304 - 4" AGGREGATE BASE
 - ITEM 441 - 6" NON-REINFORCED CONCRETE PAVEMENT

RUTH ANN PERRILL SHERIDAN ETAL
8875 STATE ROUTE 729 NW

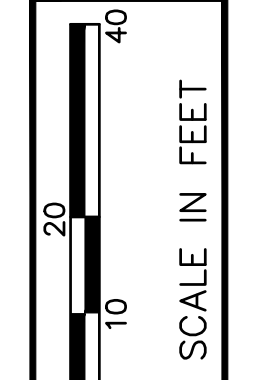
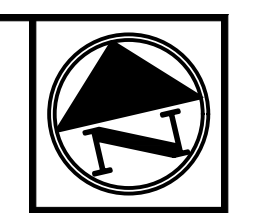
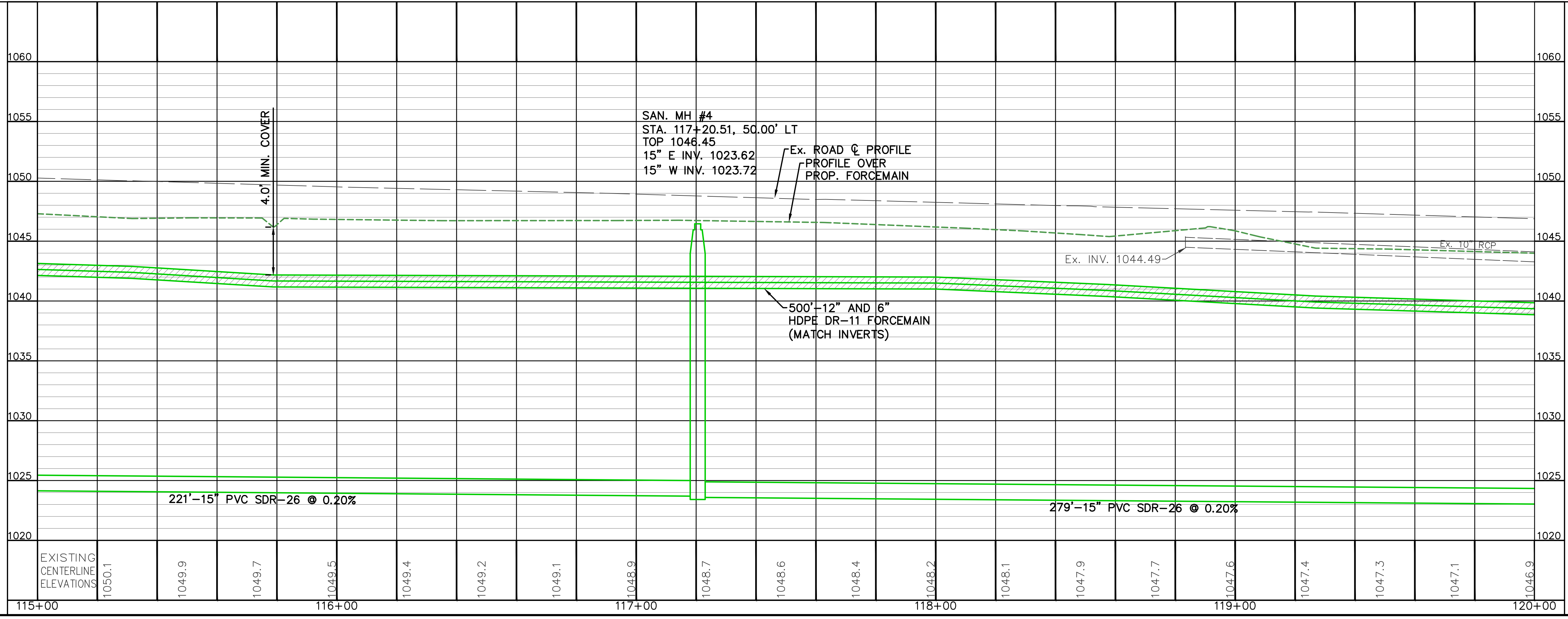
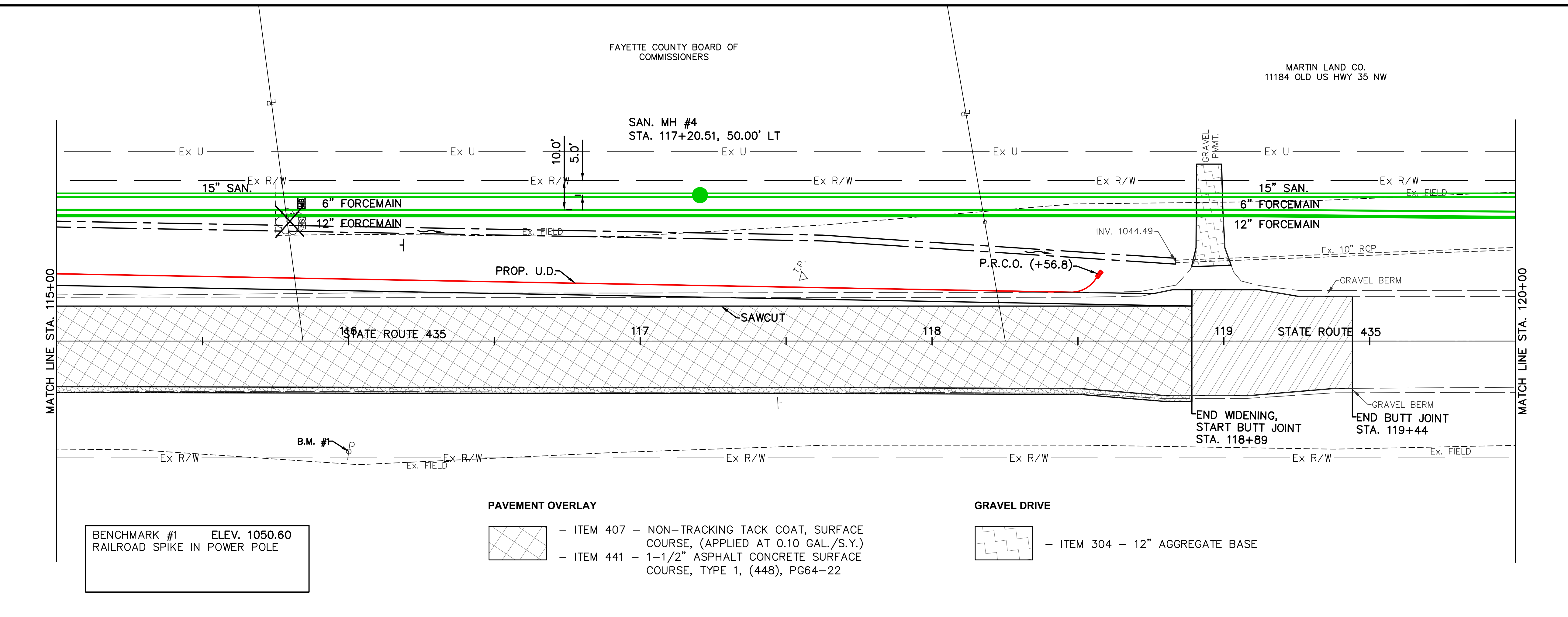


CALCULATED
JLB
CHECKED
NINS

**PLAN AND PROFILE SR 435
STA. 110+00 TO STA. 115+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

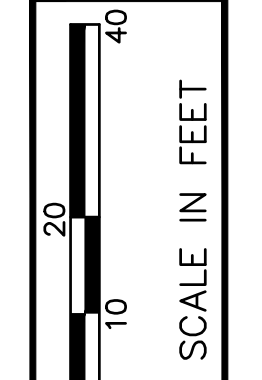
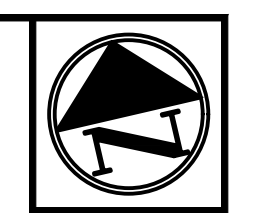
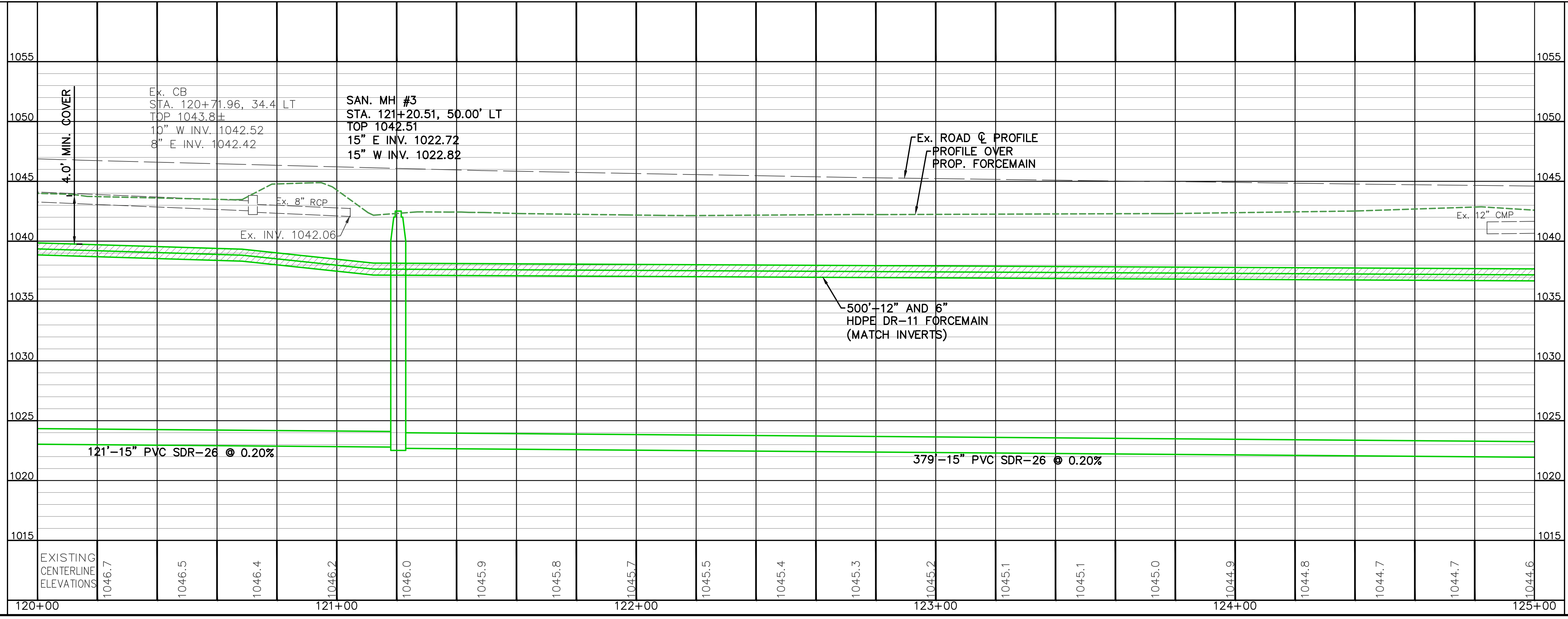
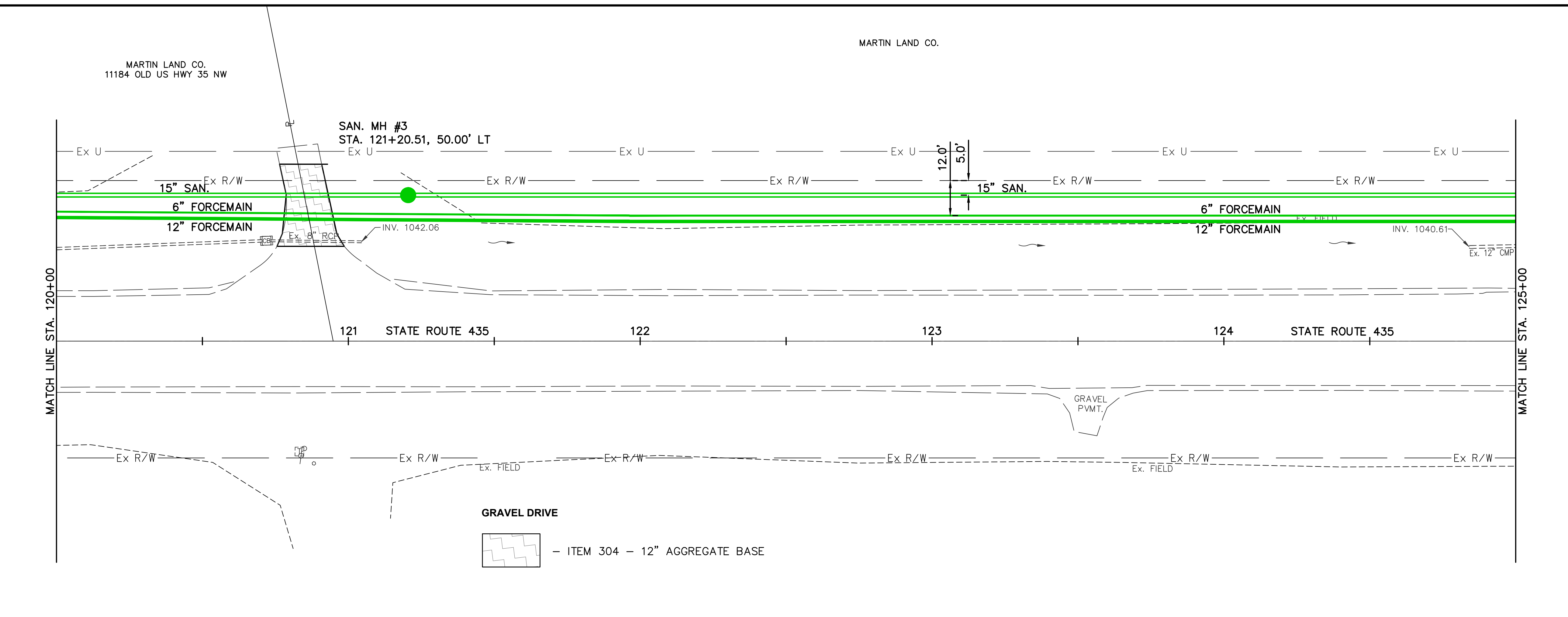


CALCULATED
JLB
CHECKED
NINS

**PLAN AND PROFILE SR 435
STA. 115+00 TO STA. 120+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

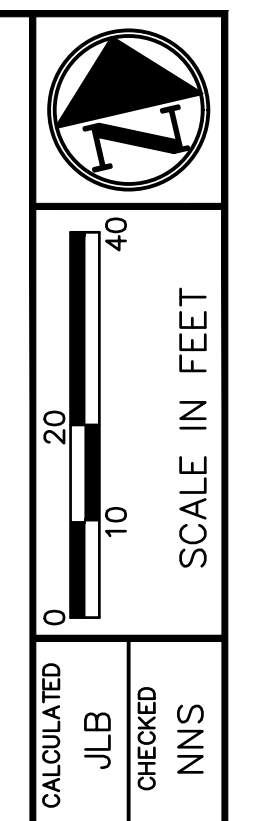
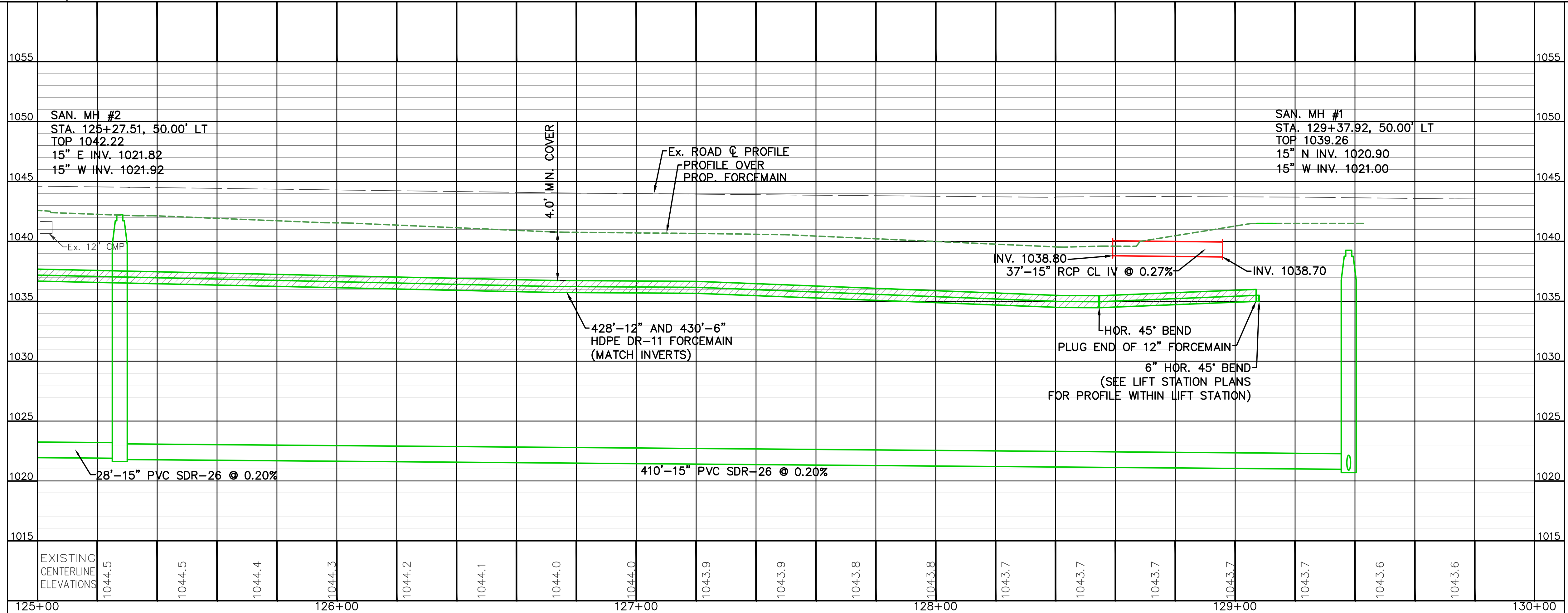
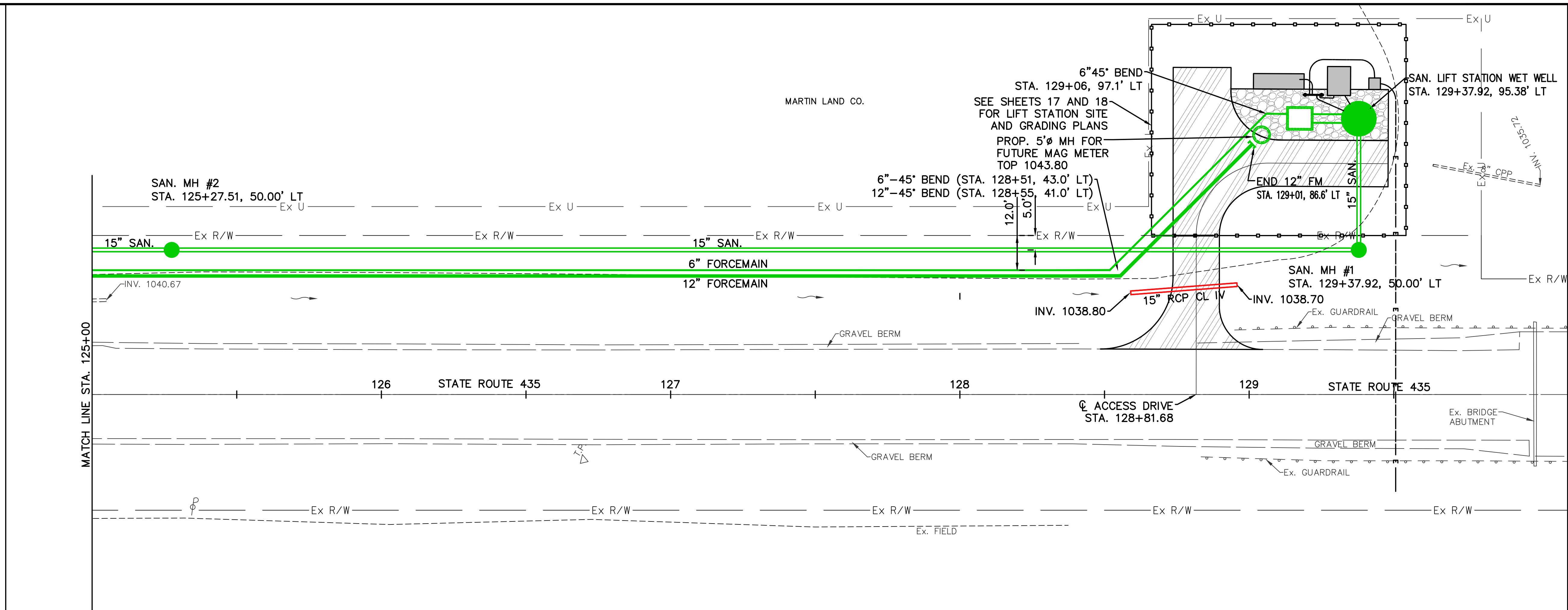


CALCULATED
JLB
CHECKED
NINS

**PLAN AND PROFILE SR 435
STA. 120+00 TO STA. 125+00**

APPROVED FOR CONSTRUCTION
7-02-2020

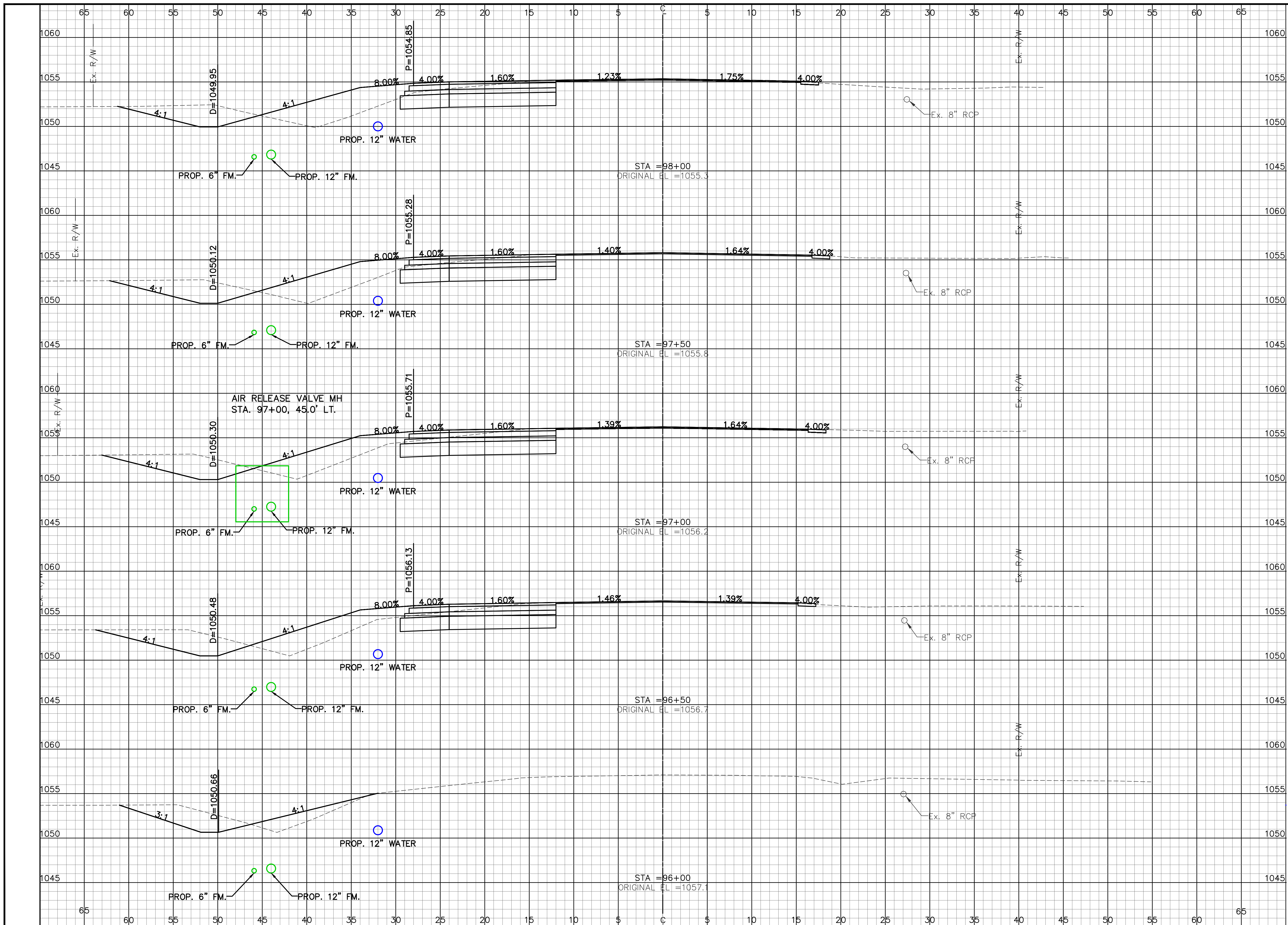
BLUEGRASS BLVD. PHASE 1



**PLAN AND PROFILE SR 435
STA. 125+00 TO STA. 130+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

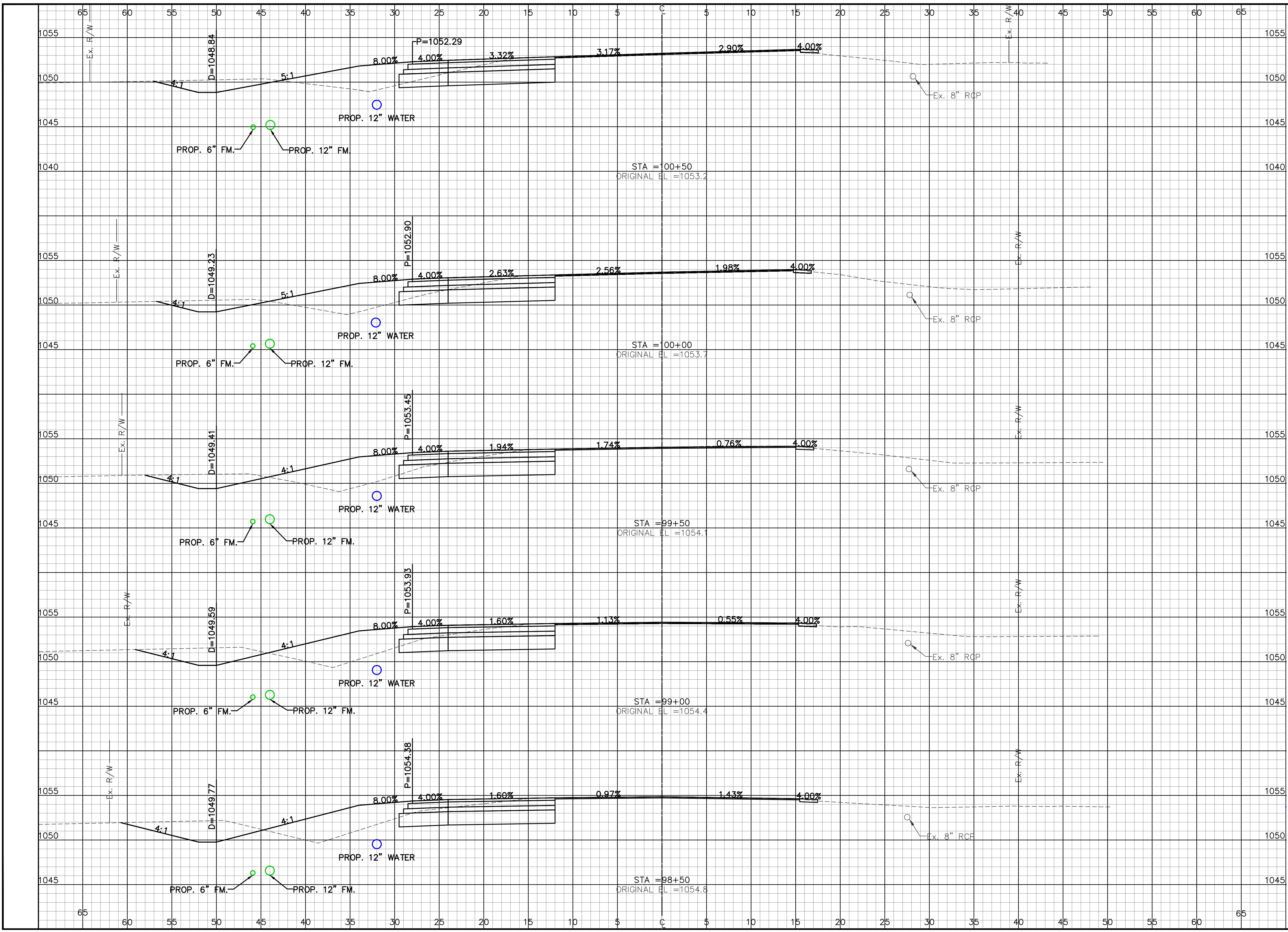


CALCULATED
JLB
CHECKED
NNS

**S.R. 435 CROSS SECTIONS
STA. 96+00 TO STA. 98+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

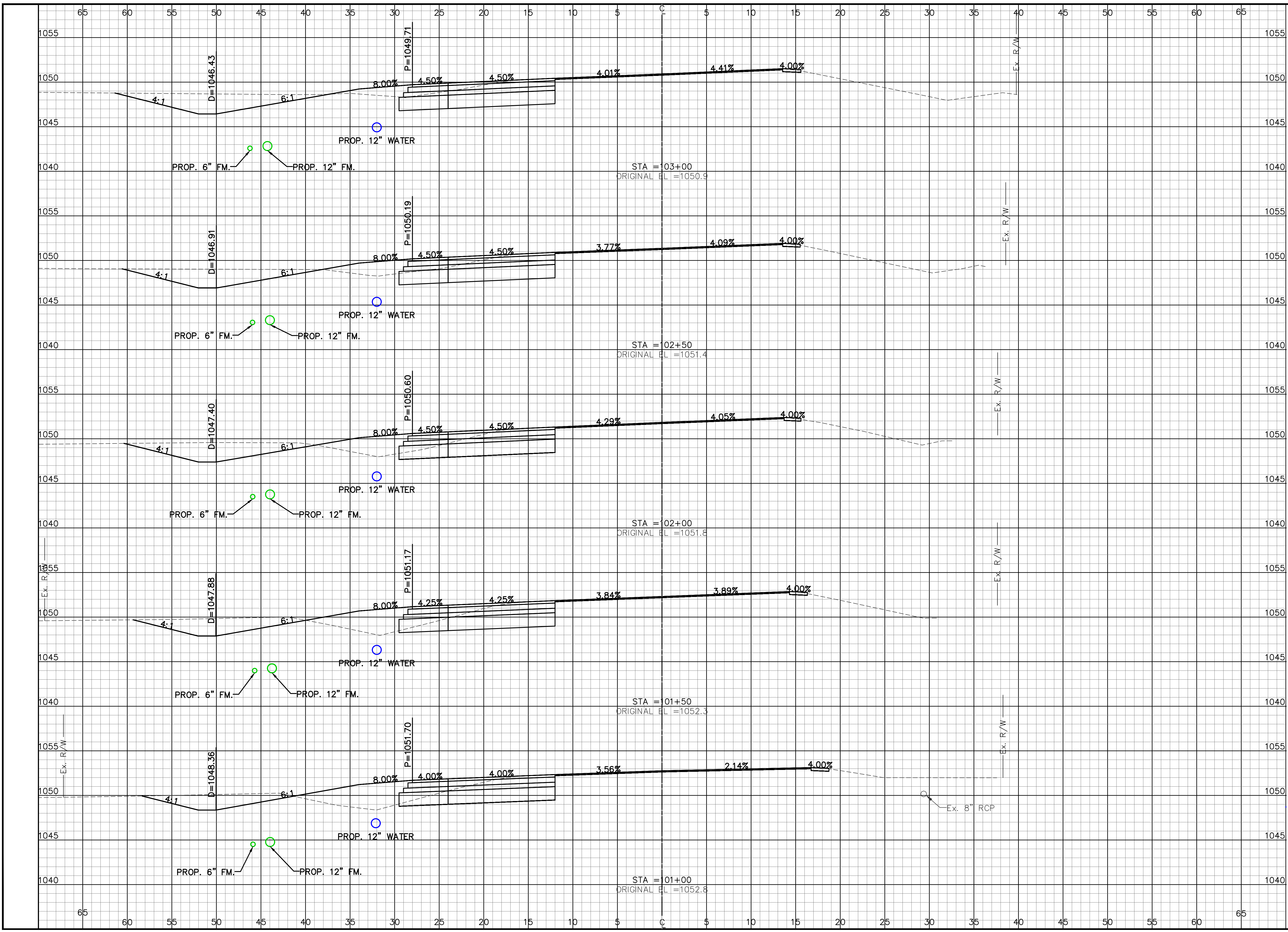


CALCULATED
JLB
CHECKED
NNS

**S.R. 435 CROSS SECTIONS
STA. 98+50 TO STA. 100+50**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

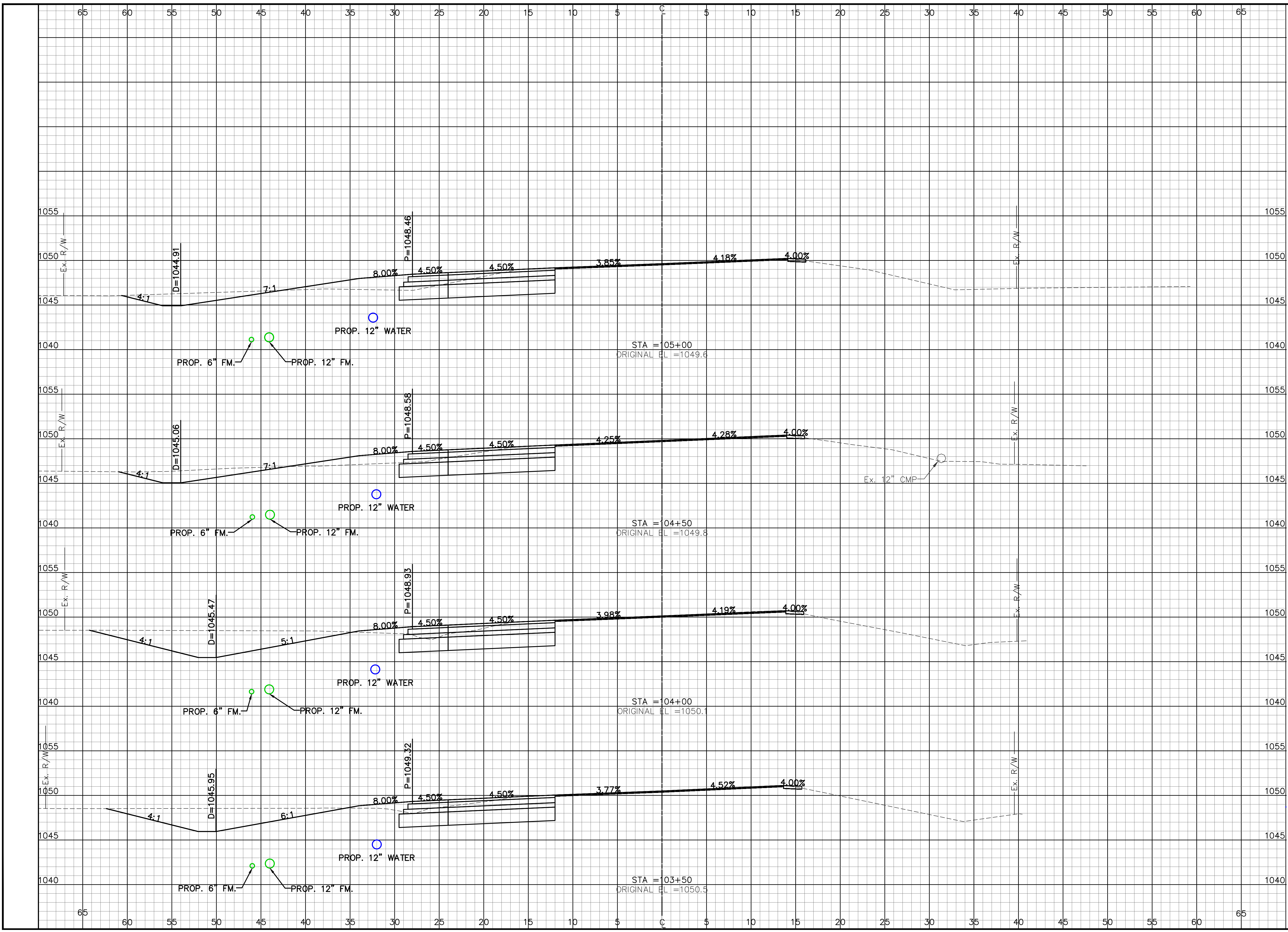


CALCULATED
JLB
CHECKED
NNS

**S.R. 435 CROSS SECTIONS
STA. 101+00 TO STA. 103+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



CALCULATED
JLB
CHECKED
NNS

**S.R. 435 CROSS SECTIONS
STA. 103+50 TO STA. 105+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

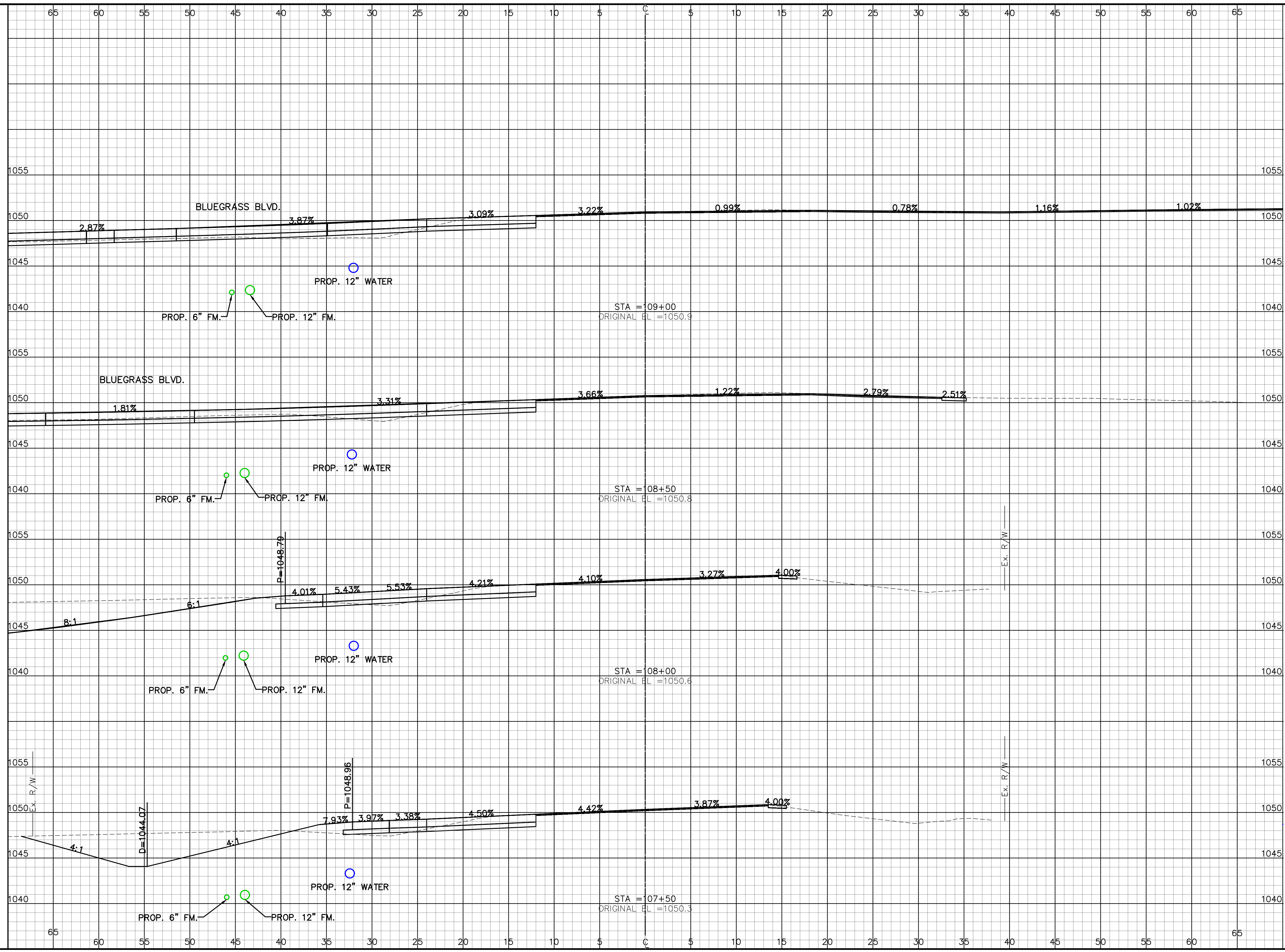


CALCULATED
JLB
CHECKED
NNS

**S.R. 435 CROSS SECTIONS
STA. 105+55.64 TO STA. 1057+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

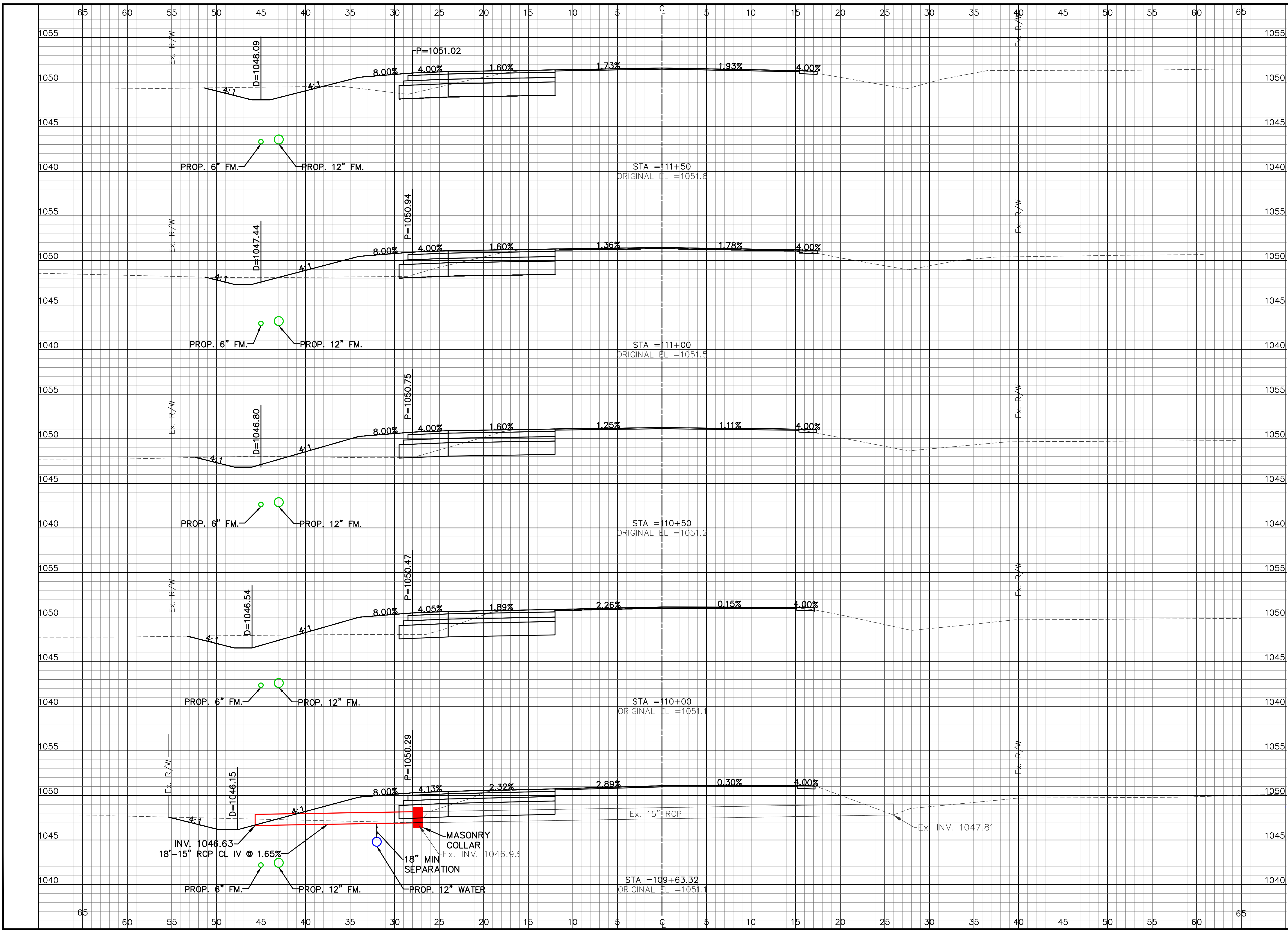


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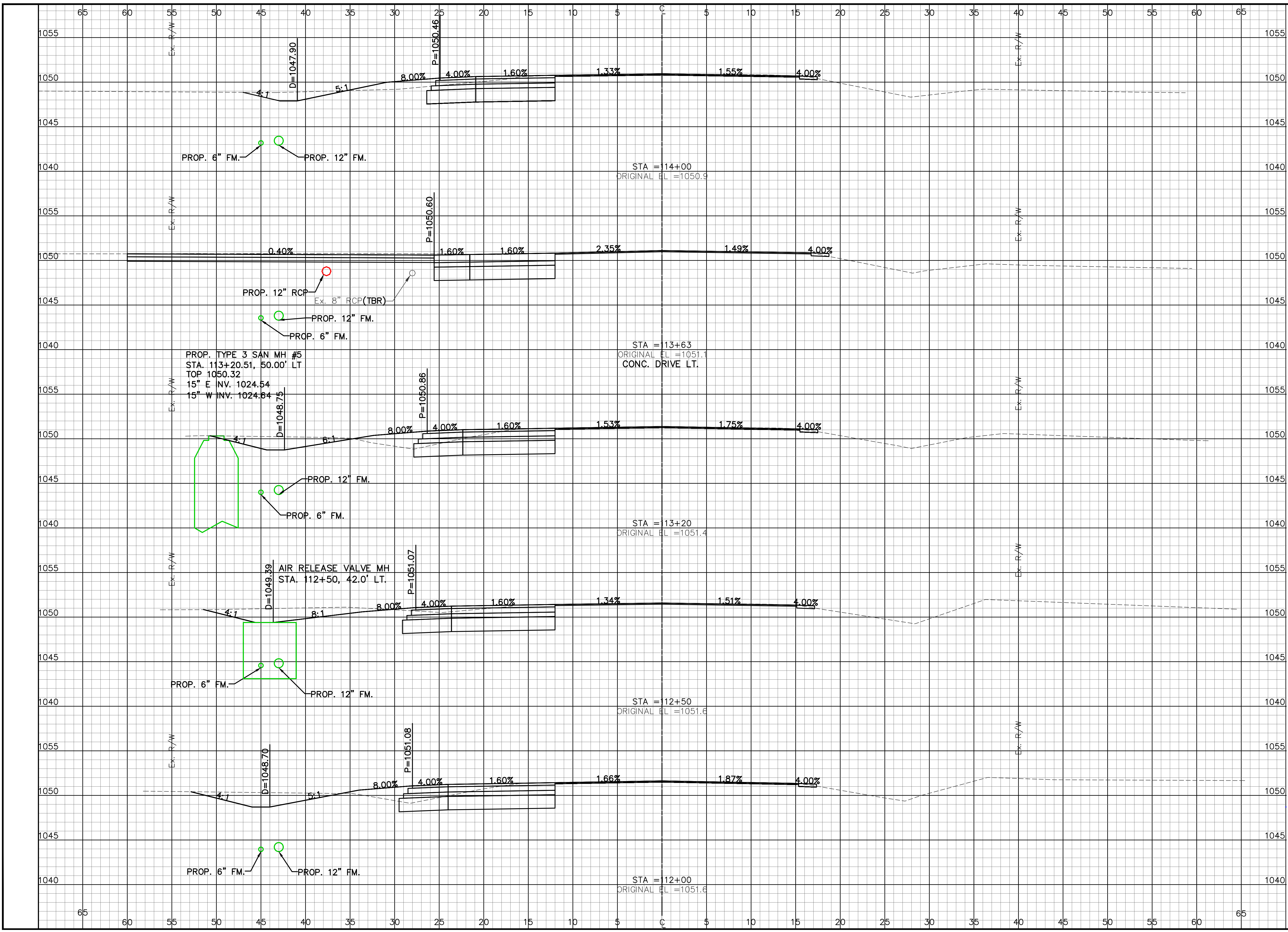
**S.R. 435 CROSS SECTIONS
 STA. 107+50 TO STA. 109+00**

APPROVED FOR CONSTRUCTION
 7-02-2020

BLUEGRASS BLVD. PHASE 1



<p>BLUEGRASS BLVD. PHASE 1</p>	<p>APPROVED FOR CONSTRUCTION 7-02-2020</p>
<p>S.R. 435 CROSS SECTIONS STA. 109+63.32 TO STA. 111+50</p>	
<p>CALCULATED JLB</p>	<p>CHECKED NNS</p>

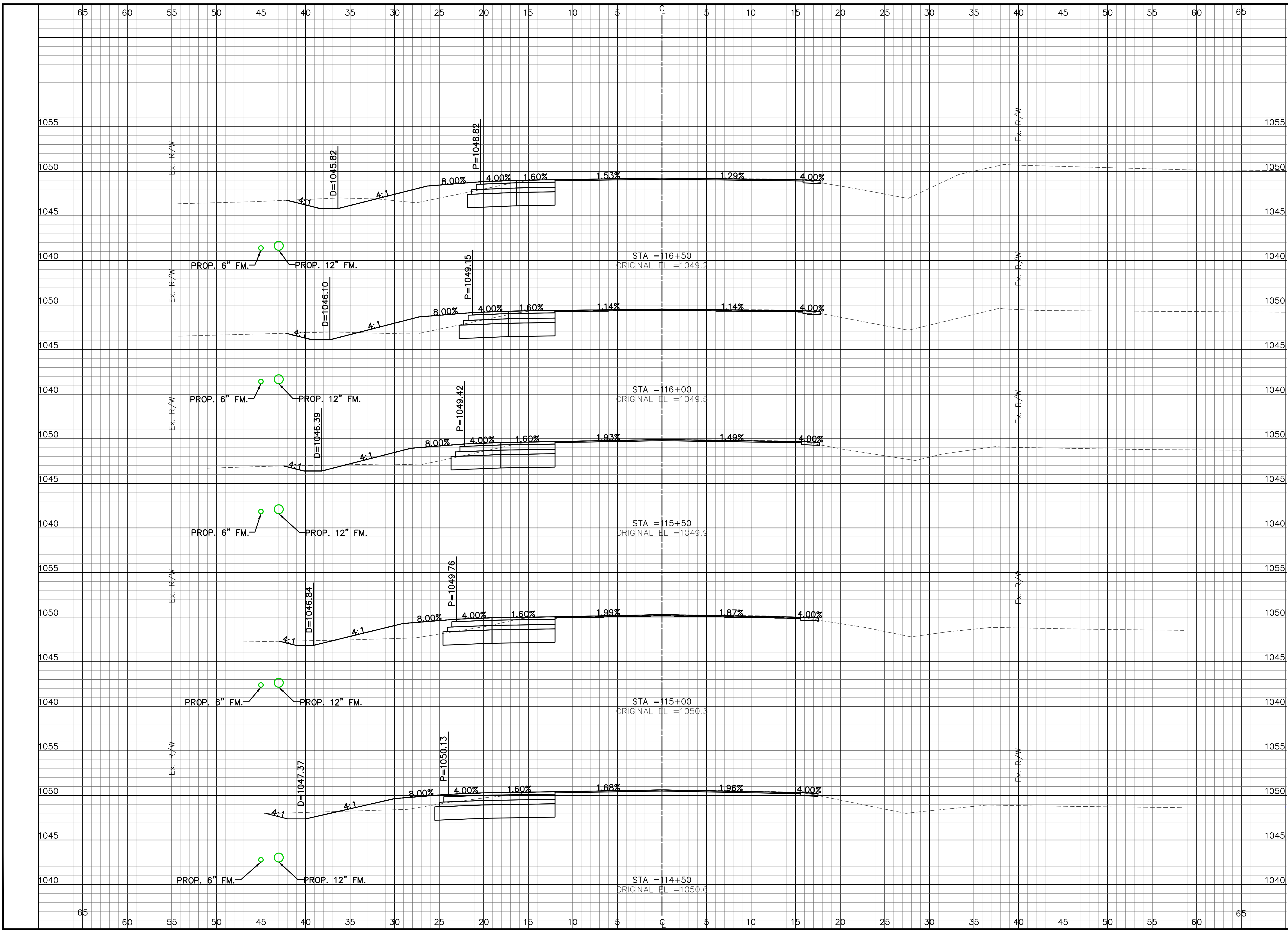


CALCULATED
JLB
CHECKED
NNS

**S.R. 435 CROSS SECTIONS
STA. 112+00 TO STA. 114+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

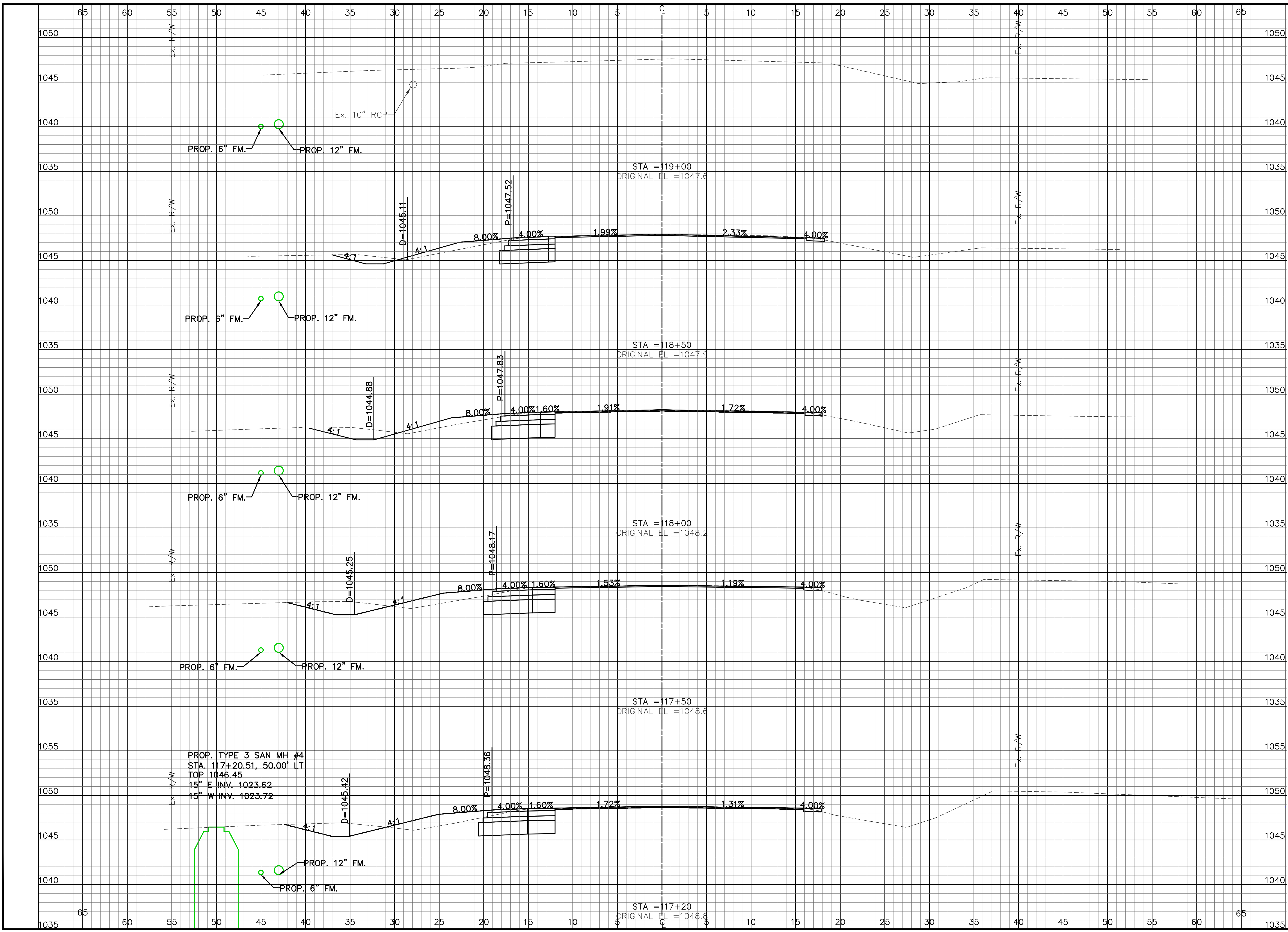


CALCULATED
JLB
CHECKED
NNS

**S.R. 435 CROSS SECTIONS
STA. 114+50 TO STA. 116+50**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

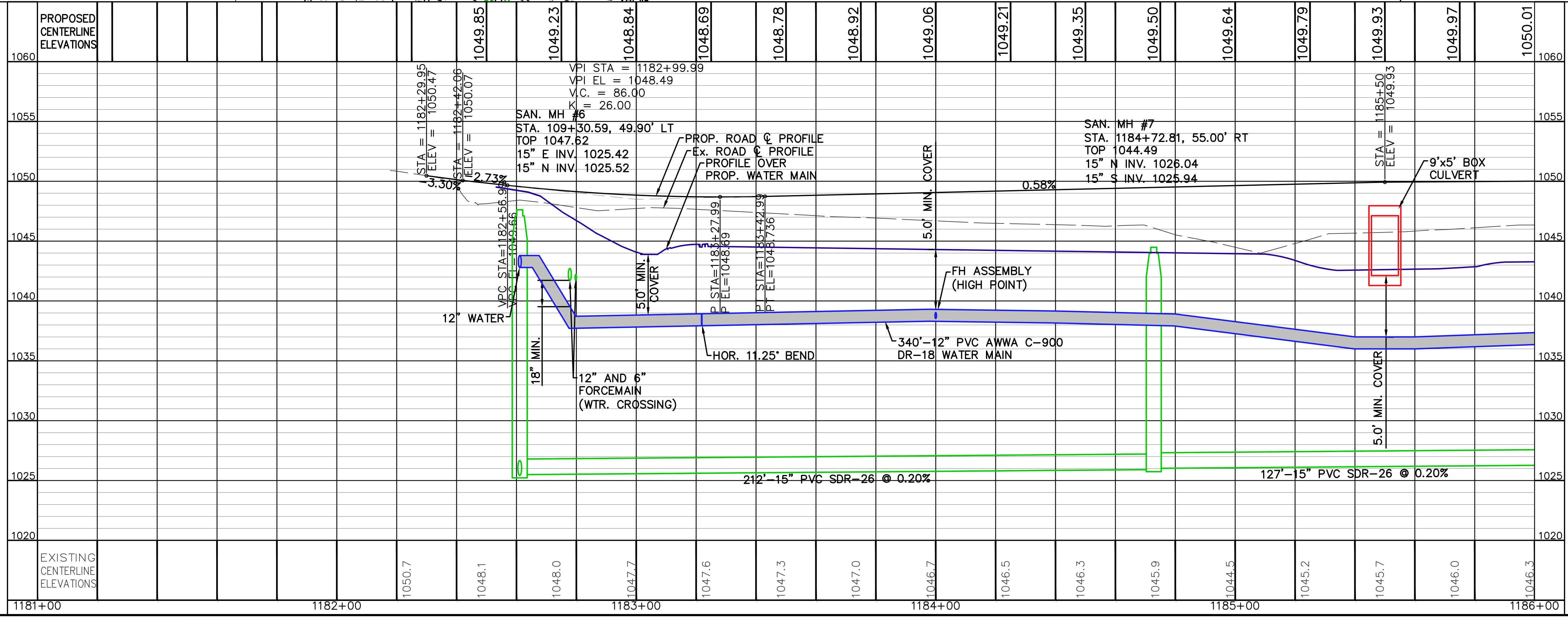
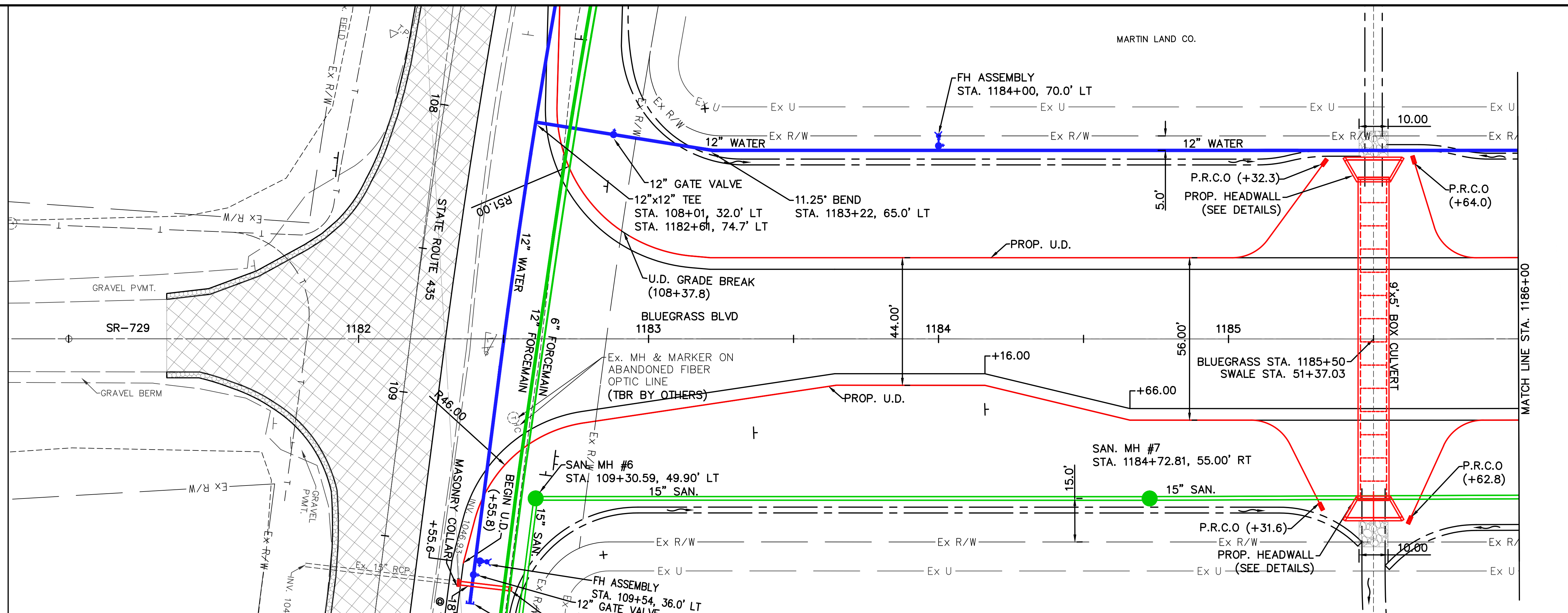


CALCULATED
JLB
CHECKED
NNS

**S.R. 435 CROSS SECTIONS
STA. 117+20 TO STA. 119+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



CALCULATED
JLB

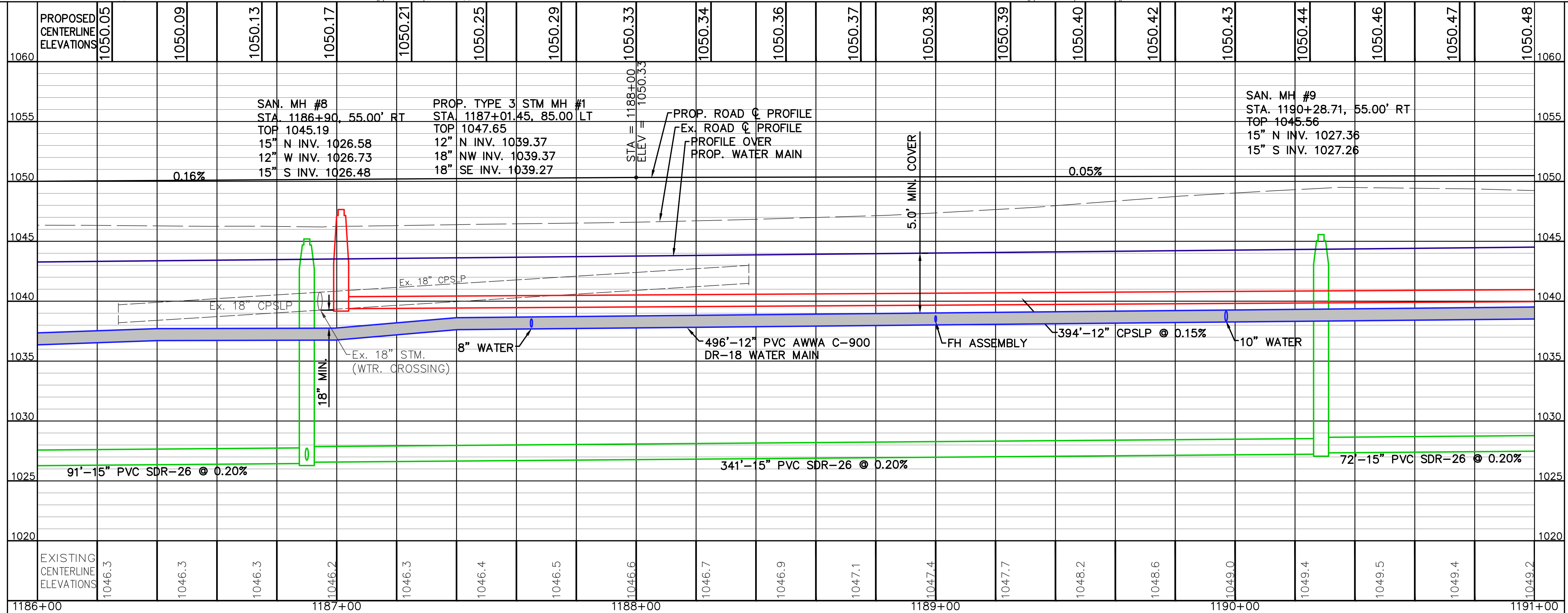
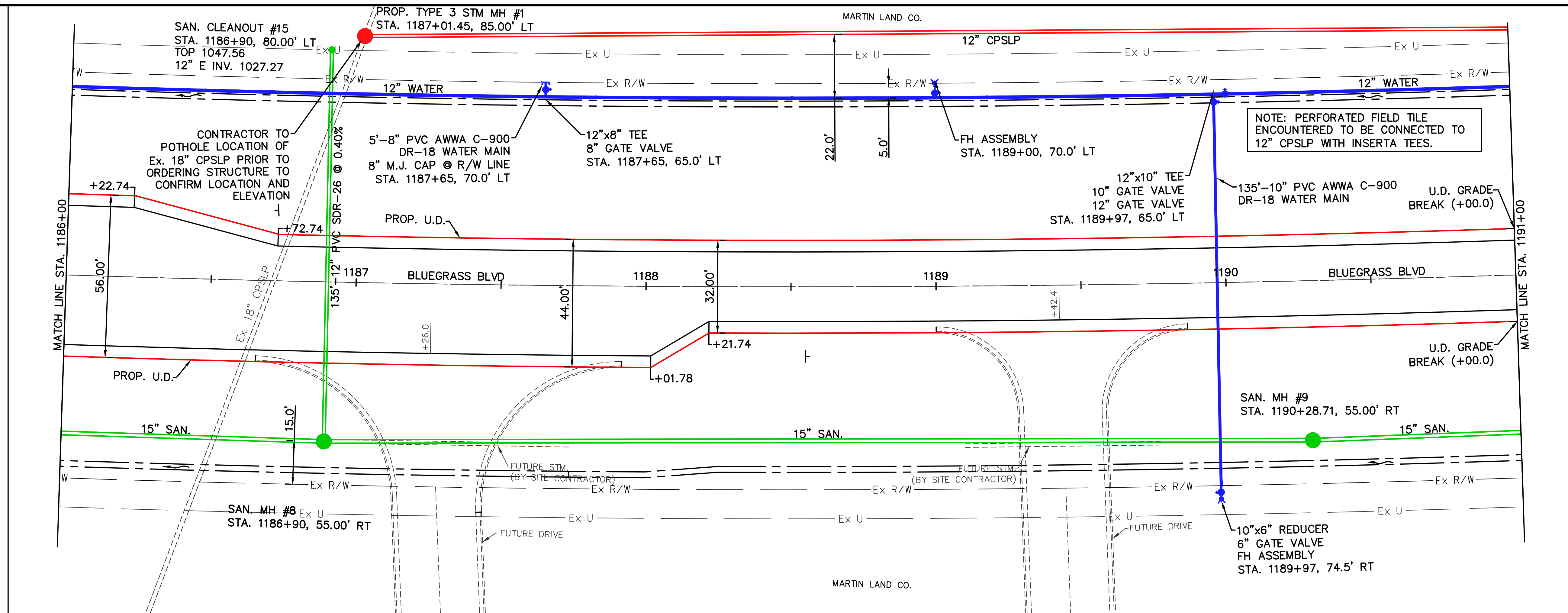
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PLAN AND PROFILE BLUEGRASS BOULEVARD
STA. 1181+00 TO STA. 1186+00

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD.
PHASE 1

44
77





SCALE IN FEET
0 10 20 40

CALCULATED JLB
CHECKED NINS

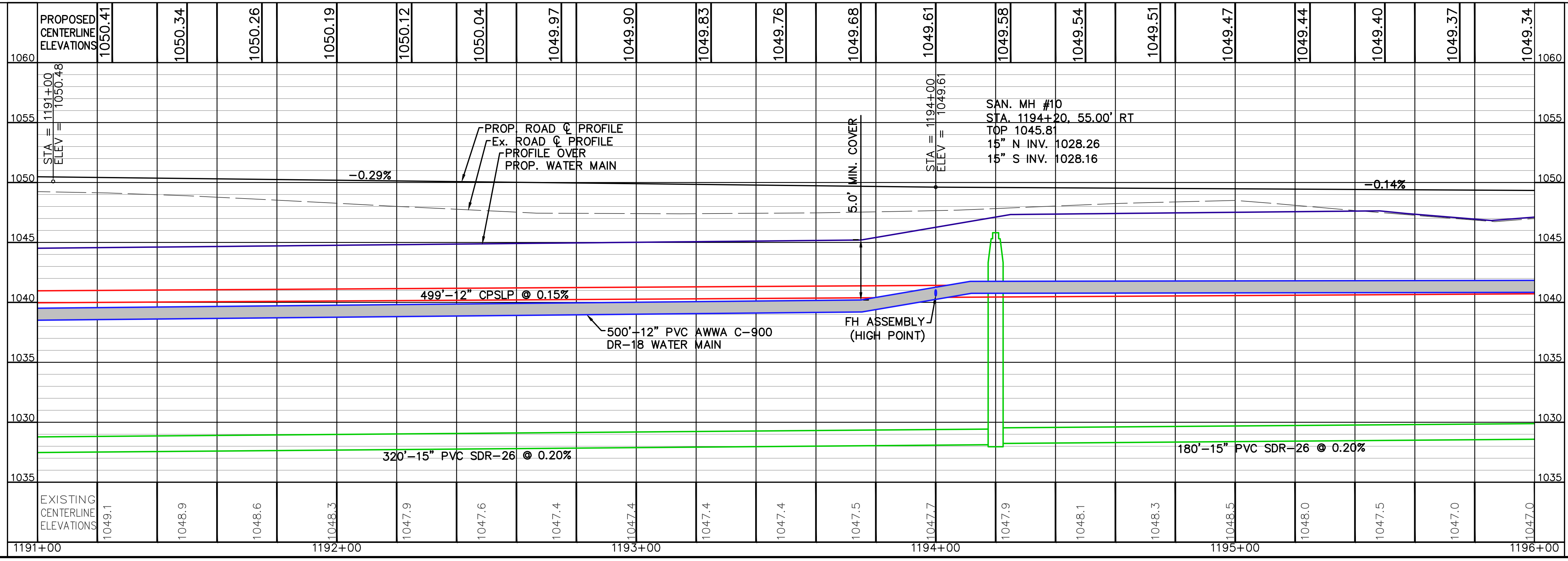
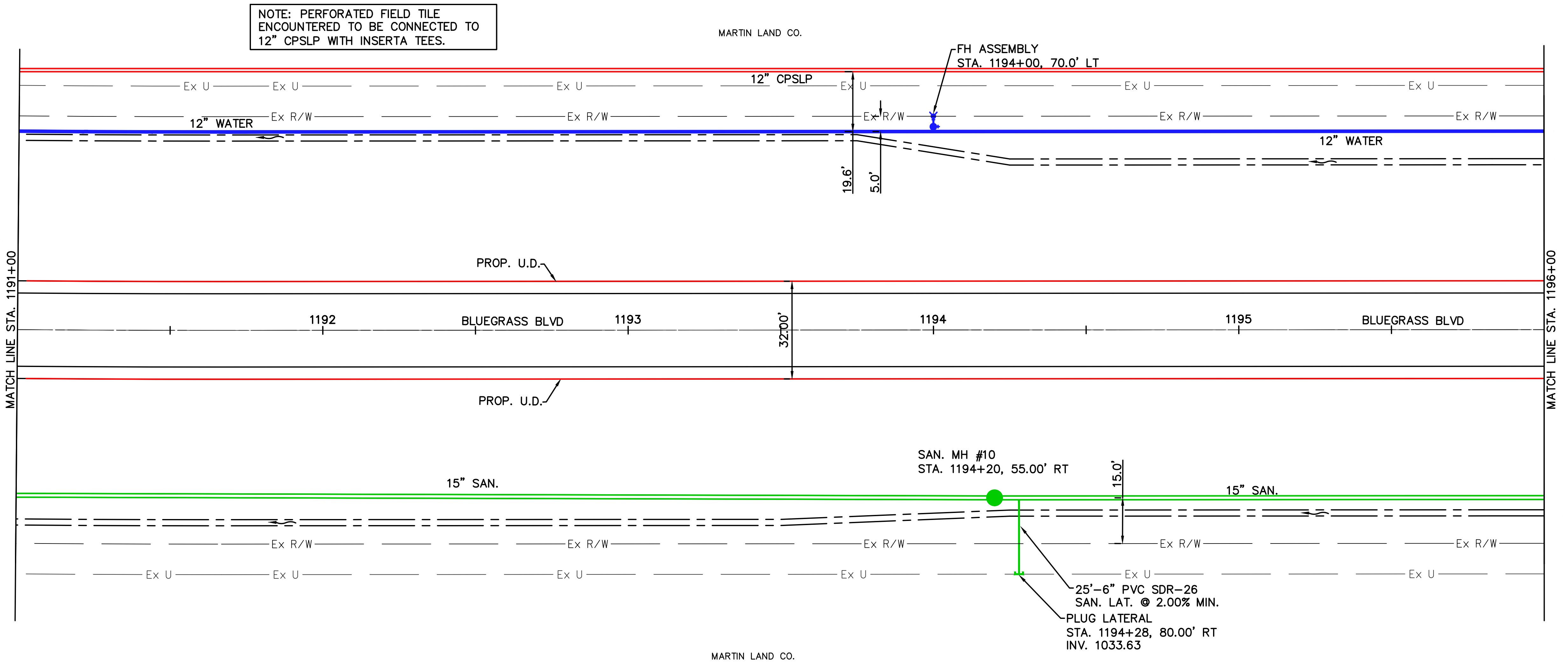
**PLAN AND PROFILE BLUEGRASS BOULEVARD
STA. 1186+00 TO STA. 1191+00**

APPROVED FOR CONSTRUCTION
7-02-2020

**BLUEGRASS BLVD.
PHASE 1**

45
77

NOTE: PERFORATED FIELD TILE ENCOUNTERED TO BE CONNECTED TO 12" CPSLP WITH INSERTA TEES.

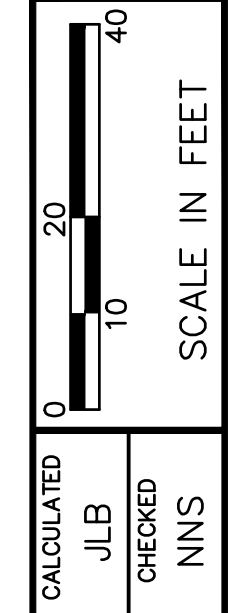
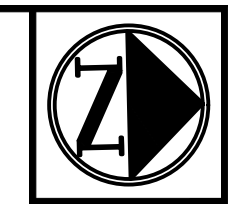
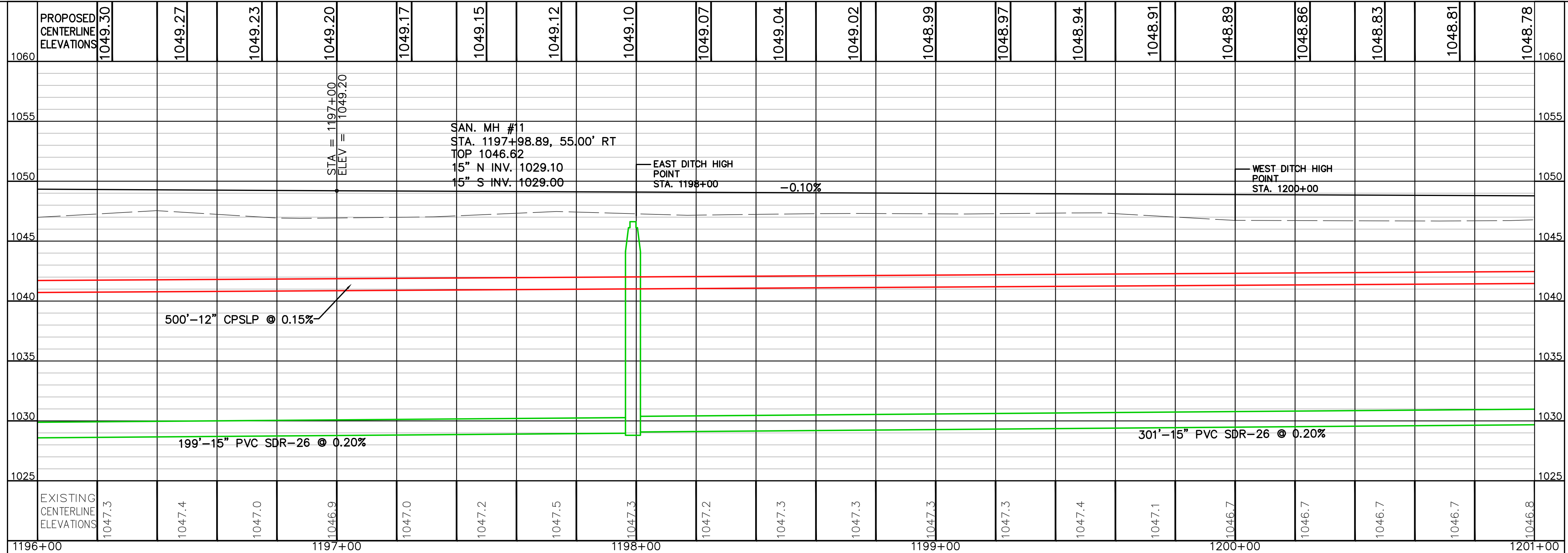
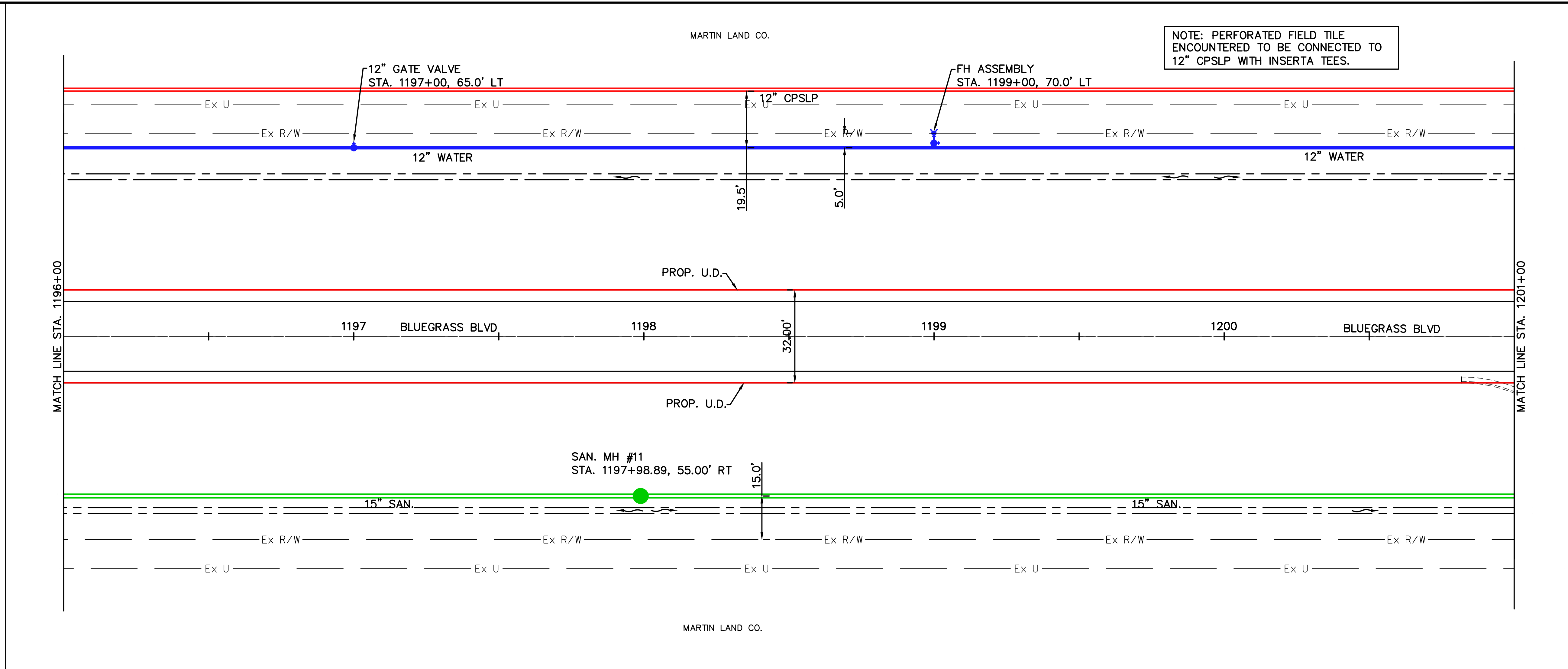


SCALE IN FEET

**PLAN AND PROFILE BLUEGRASS BOULEVARD
STA. 1191+00 TO STA. 1196+00**

APPROVED FOR CONSTRUCTION
7-02-2020

**BLUEGRASS BLVD.
PHASE 1**

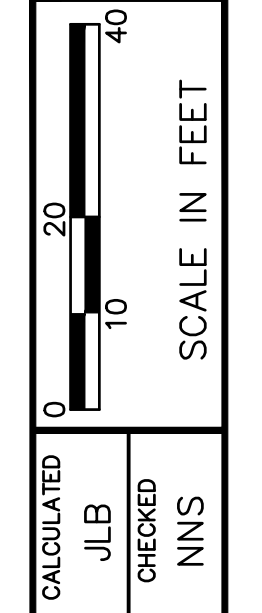
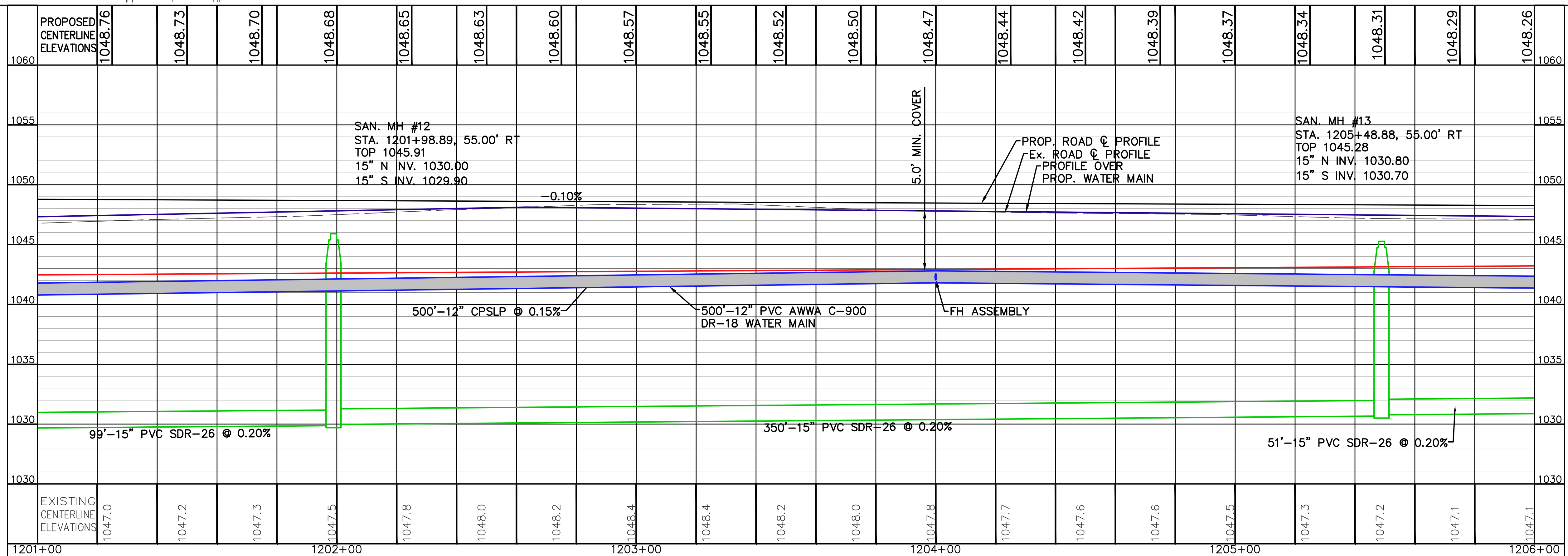
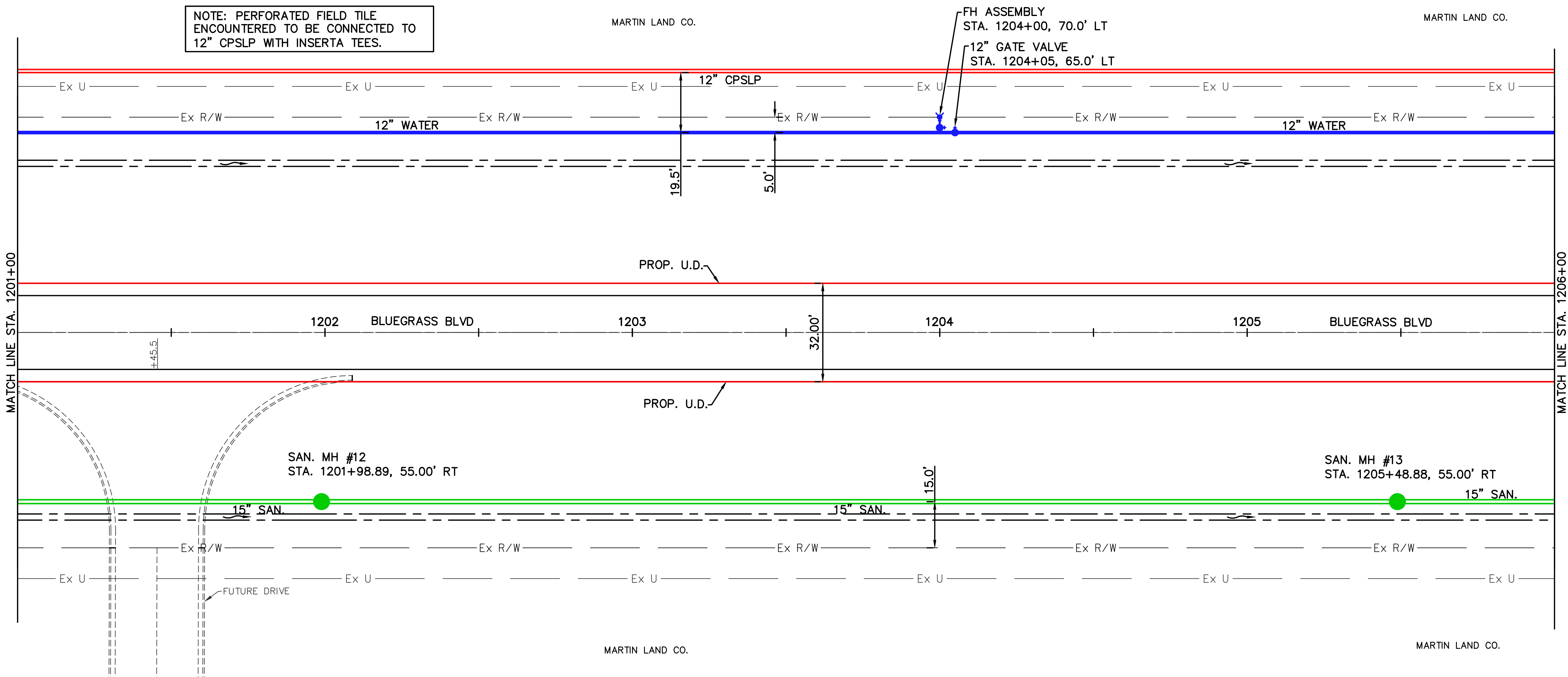


**PLAN AND PROFILE BLUEGRASS BOULEVARD
STA. 1196+00 TO STA. 1201+00**

APPROVED FOR CONSTRUCTION
7-02-2020

**BLUEGRASS BLVD.
PHASE 1**

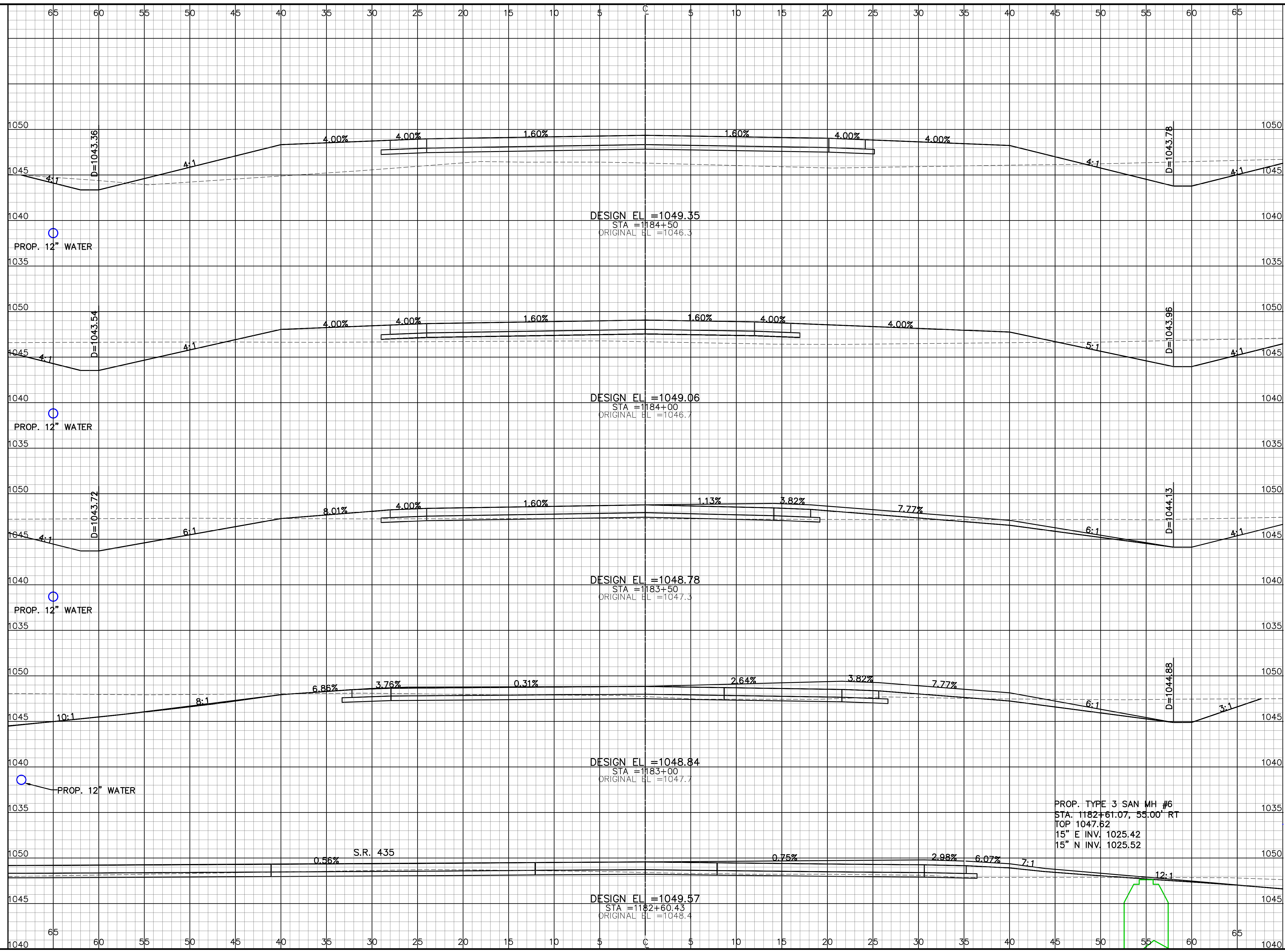
NOTE: PERFORATED FIELD TILE ENCOUNTERED TO BE CONNECTED TO 12" CPSP LP WITH INSERTA TEES.



**PLAN AND PROFILE BLUEGRASS BOULEVARD
STA. 1201+00 TO STA. 1206+00**

APPROVED FOR CONSTRUCTION
7-02-2020

**BLUEGRASS BLVD.
PHASE 1**

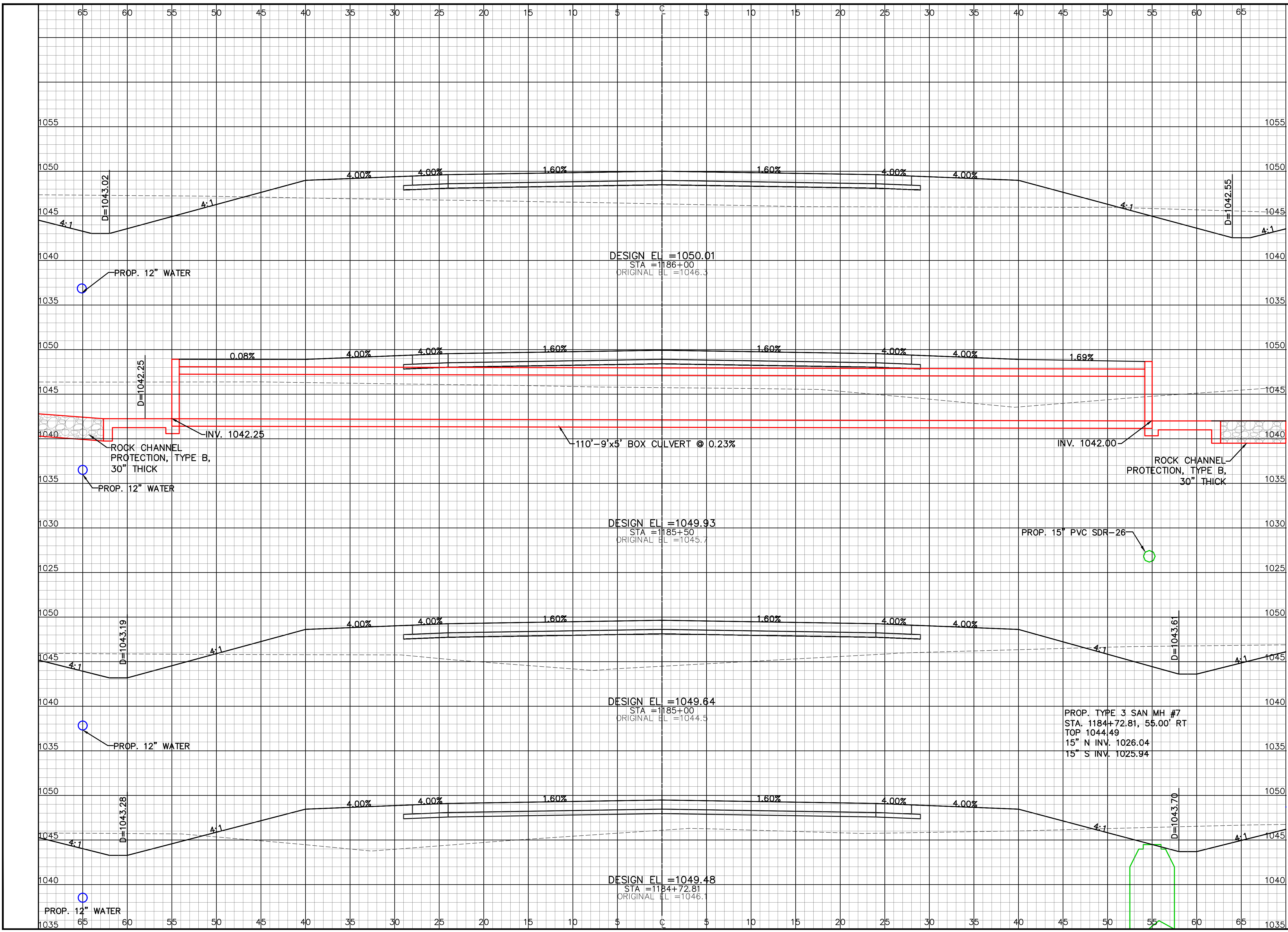


CALCULATED
JLB
CHECKED
NNS

**BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1182+60.43 TO STA. 1184+50**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

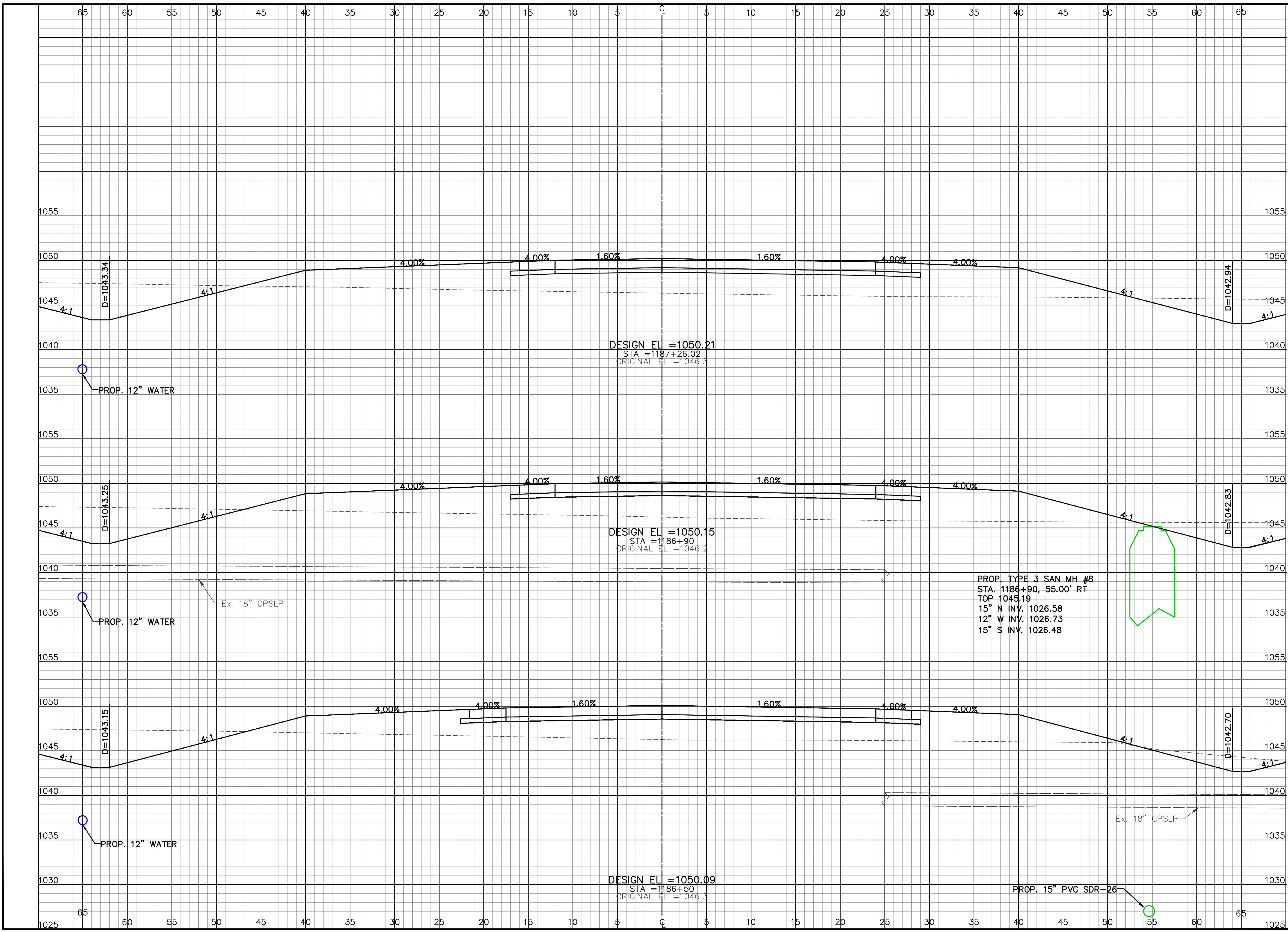


CALCULATED
JLB
CHECKED
NNS

**BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1184+72.81 TO STA. 1186+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

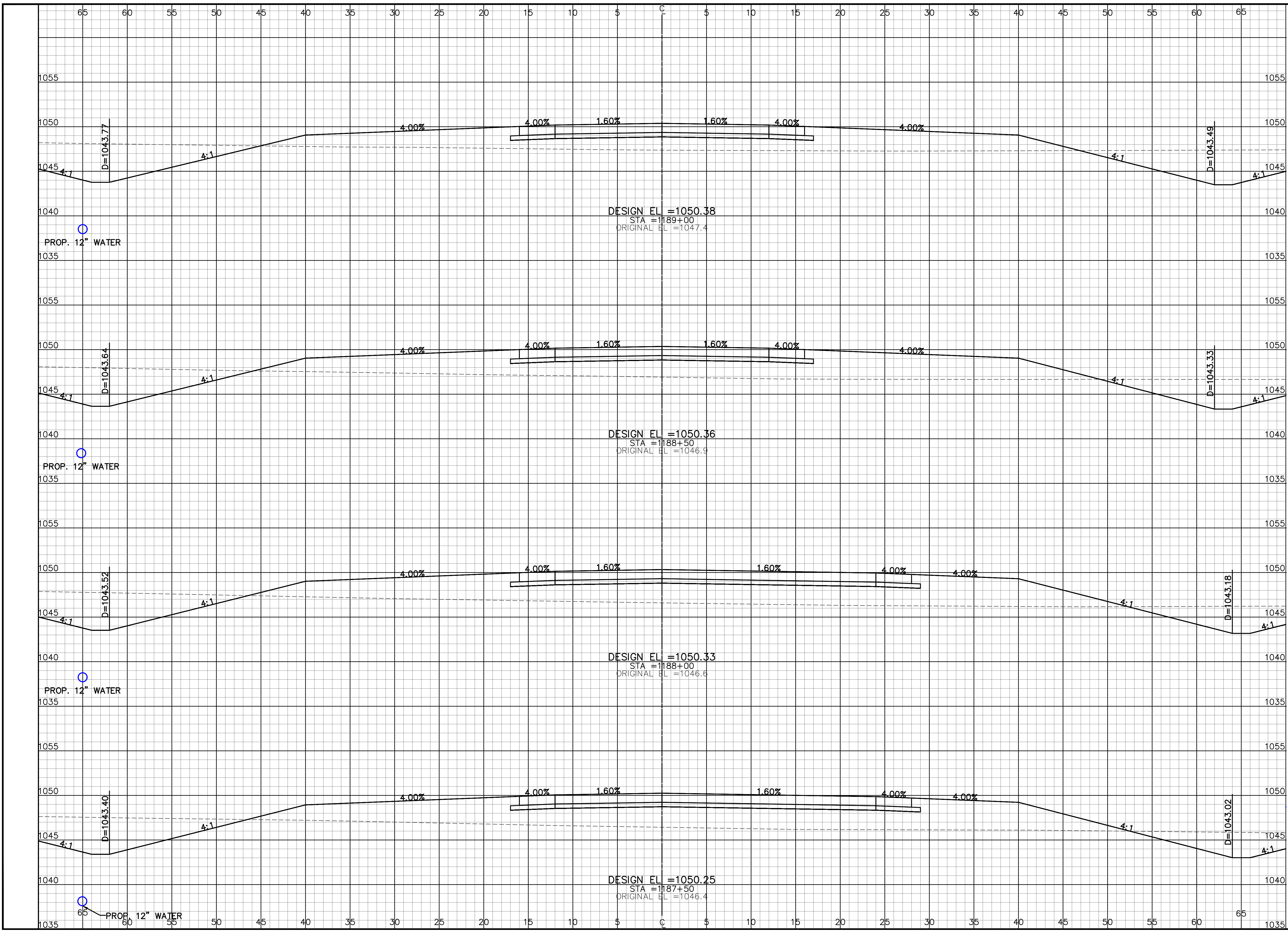


CALCULATED
JLB
CHECKED
NNS

**BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1188+50 TO STA. 1187+26.02**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

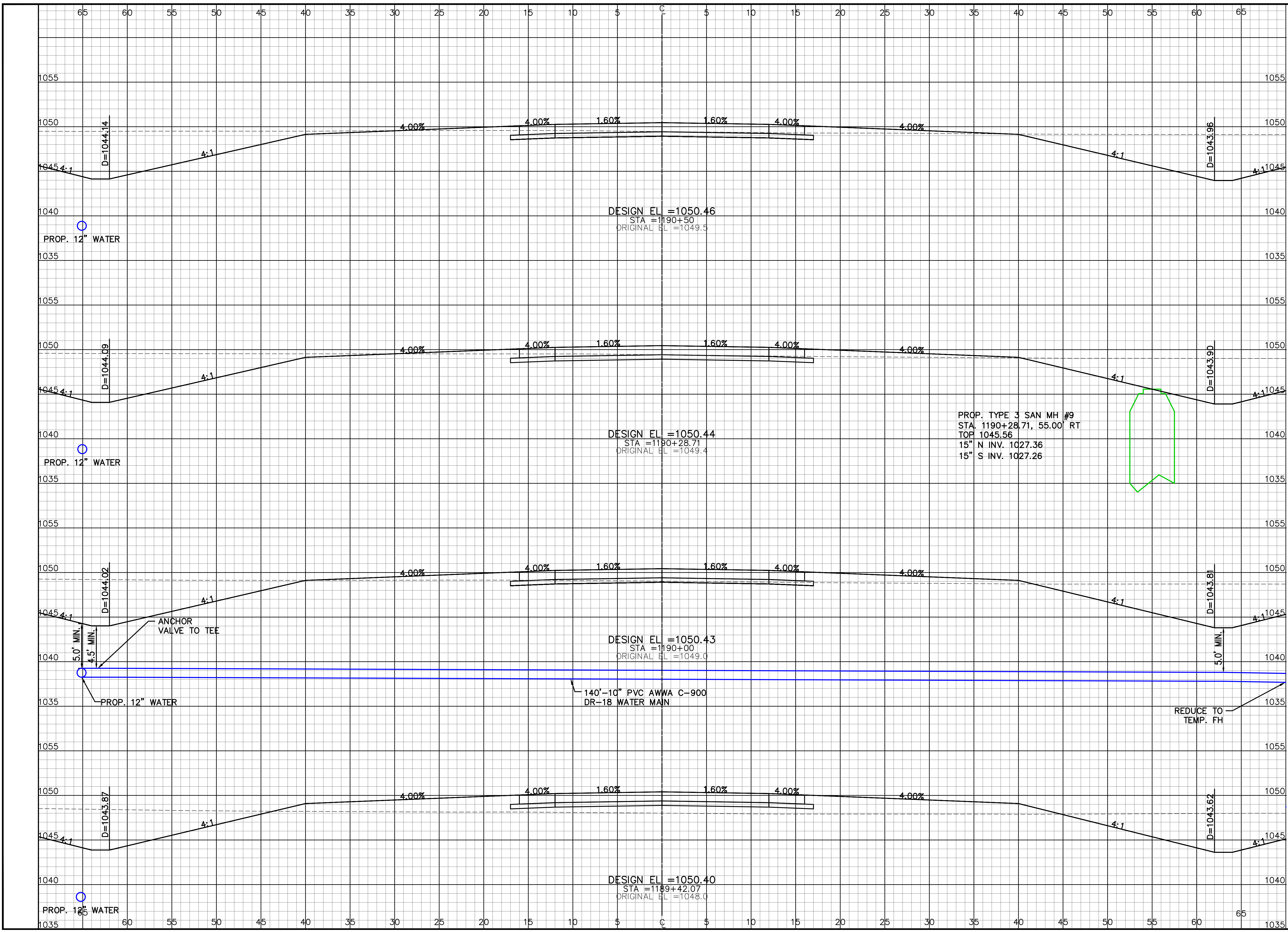


CALCULATED
JLB
CHECKED
NNS

BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1187+50 TO STA. 1189+00

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

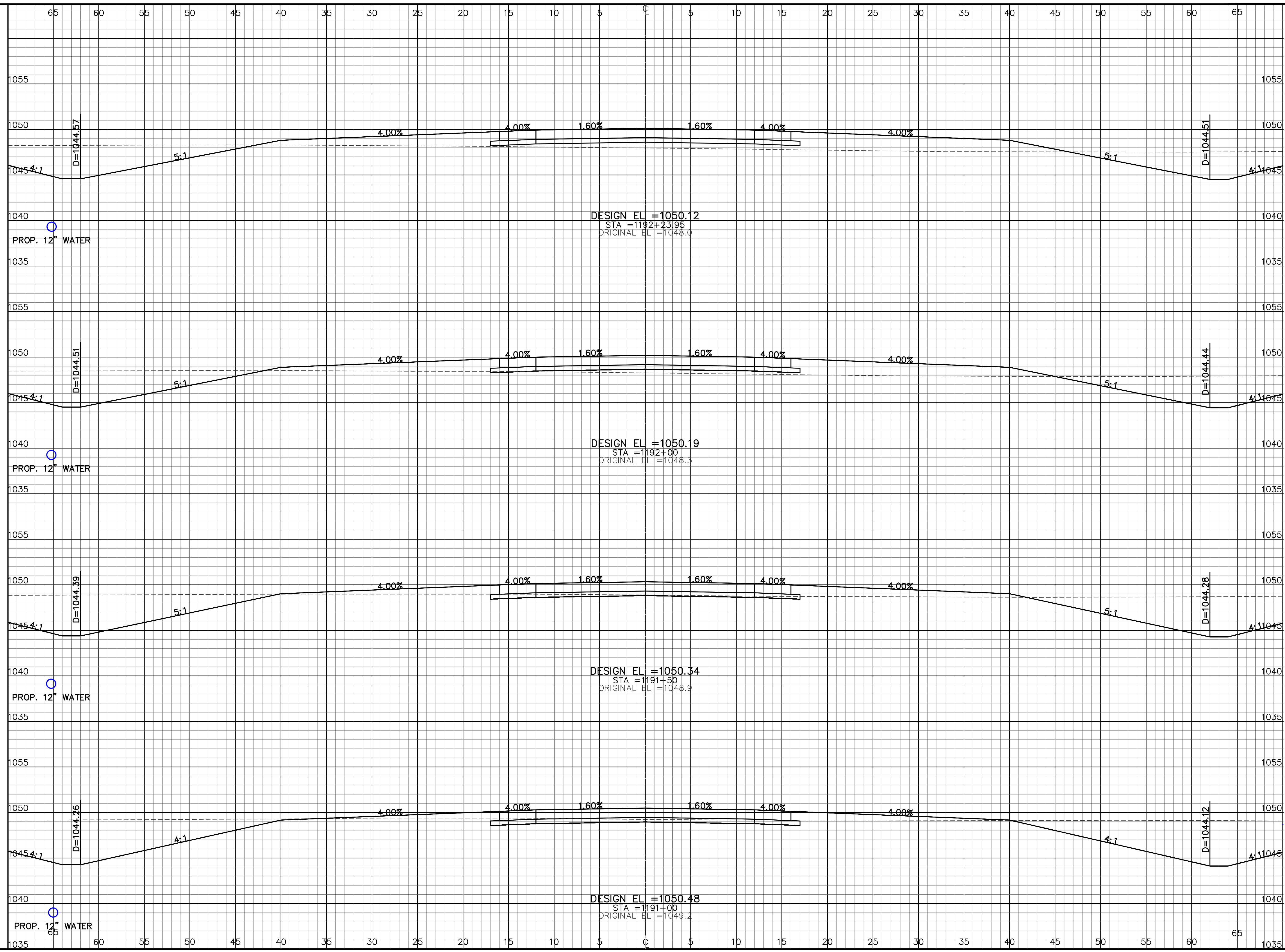


CALCULATED
JLB
CHECKED
NNS

**BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1189+42.07 TO STA. 1190+50**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

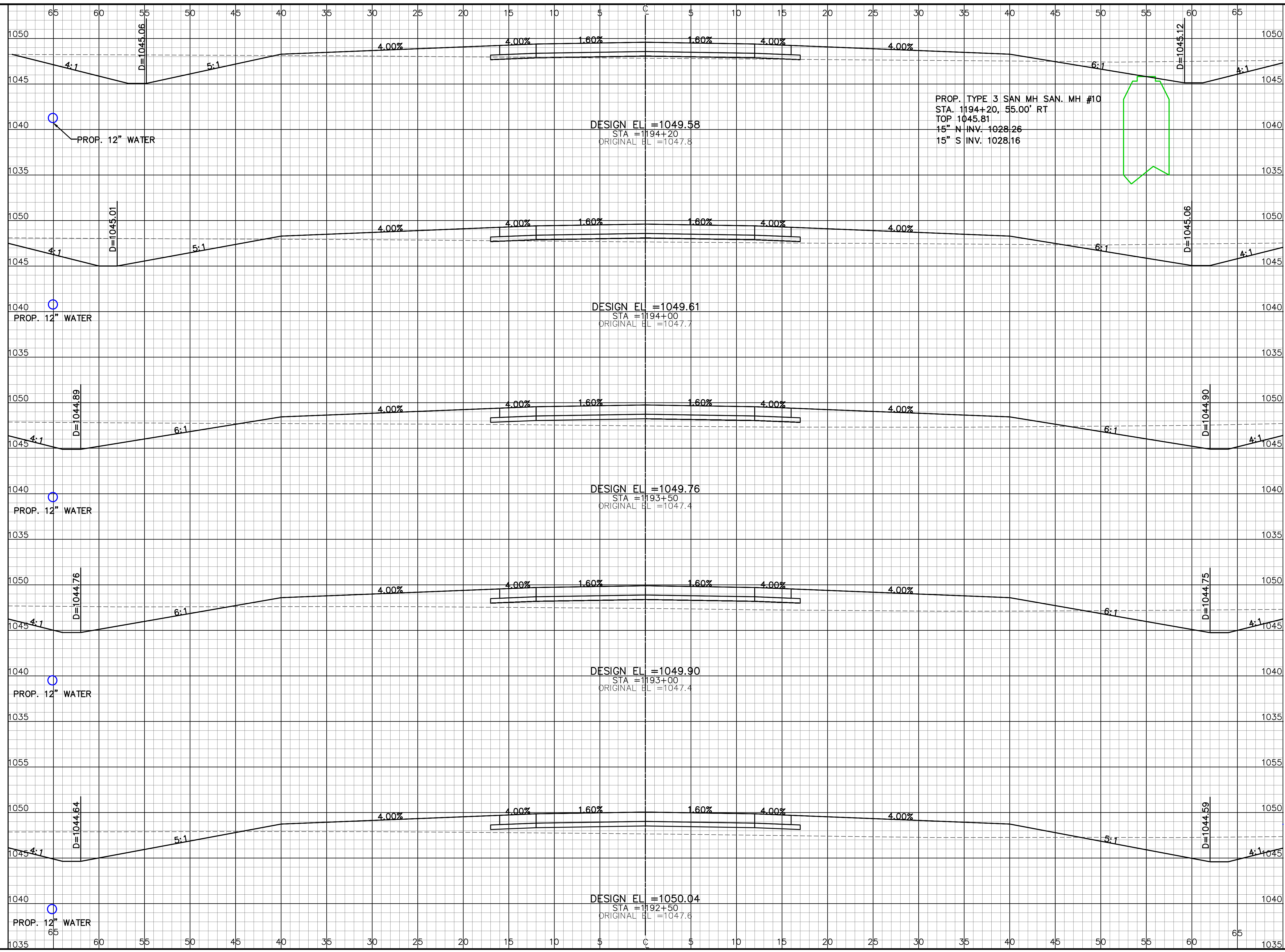


CALCULATED
JLB
CHECKED
NNS

BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1191+00 TO STA. 1192+23.95

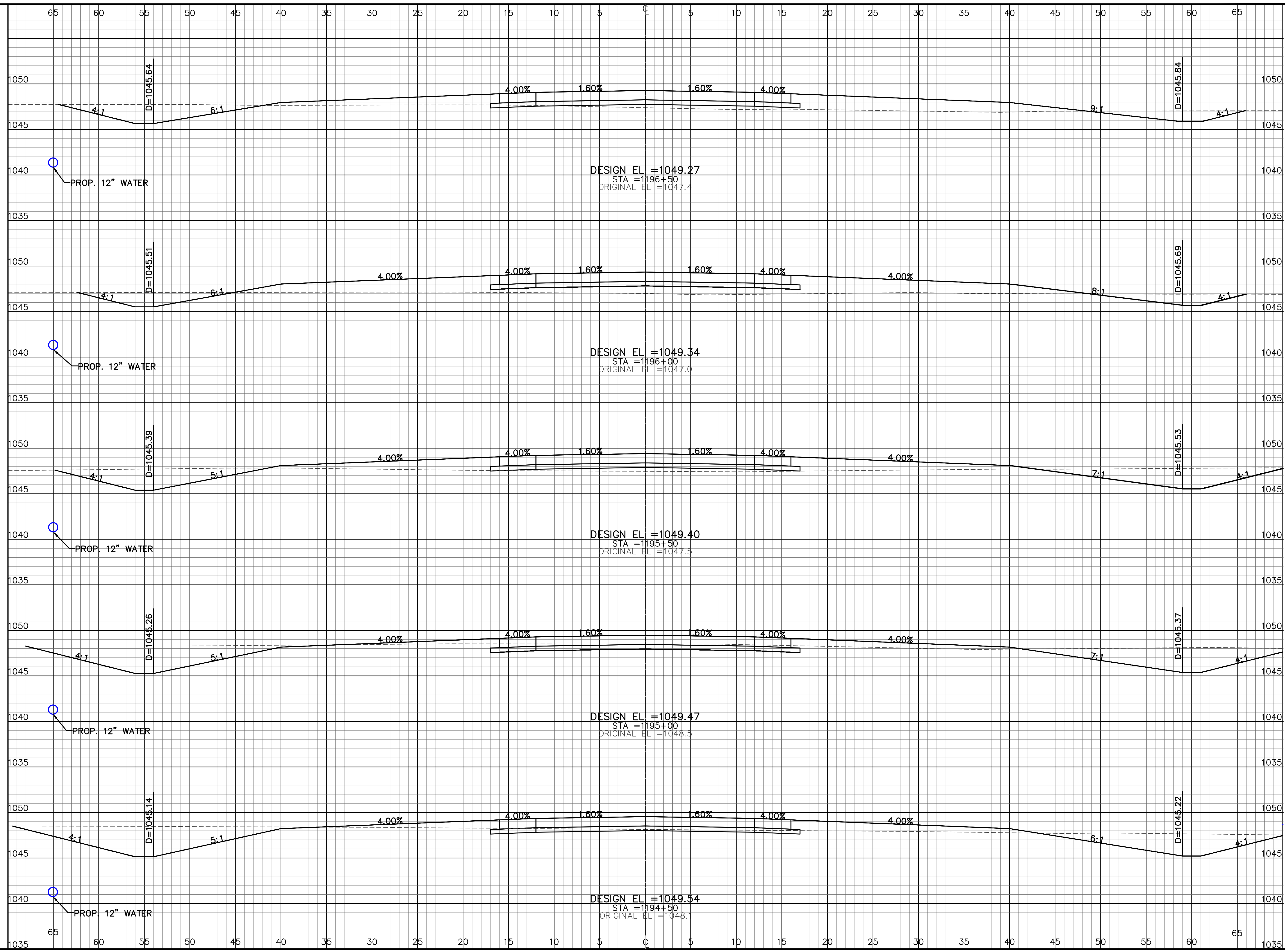
APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



PROP. TYPE 3 SAN MH SAN. MH #10
 STA. 1194+20, 55.00' RT
 TOP 1045.81
 15" N INV. 1028.26
 15" S INV. 1028.16

CALCULATED JLB	CHECKED NNS
BLUEGRASS BOULEVARD CROSS SECTIONS	
STA. 1192+50 TO STA. 1194+20	
APPROVED FOR CONSTRUCTION 7-02-2020	
BLUEGRASS BLVD. PHASE 1	
56 77	

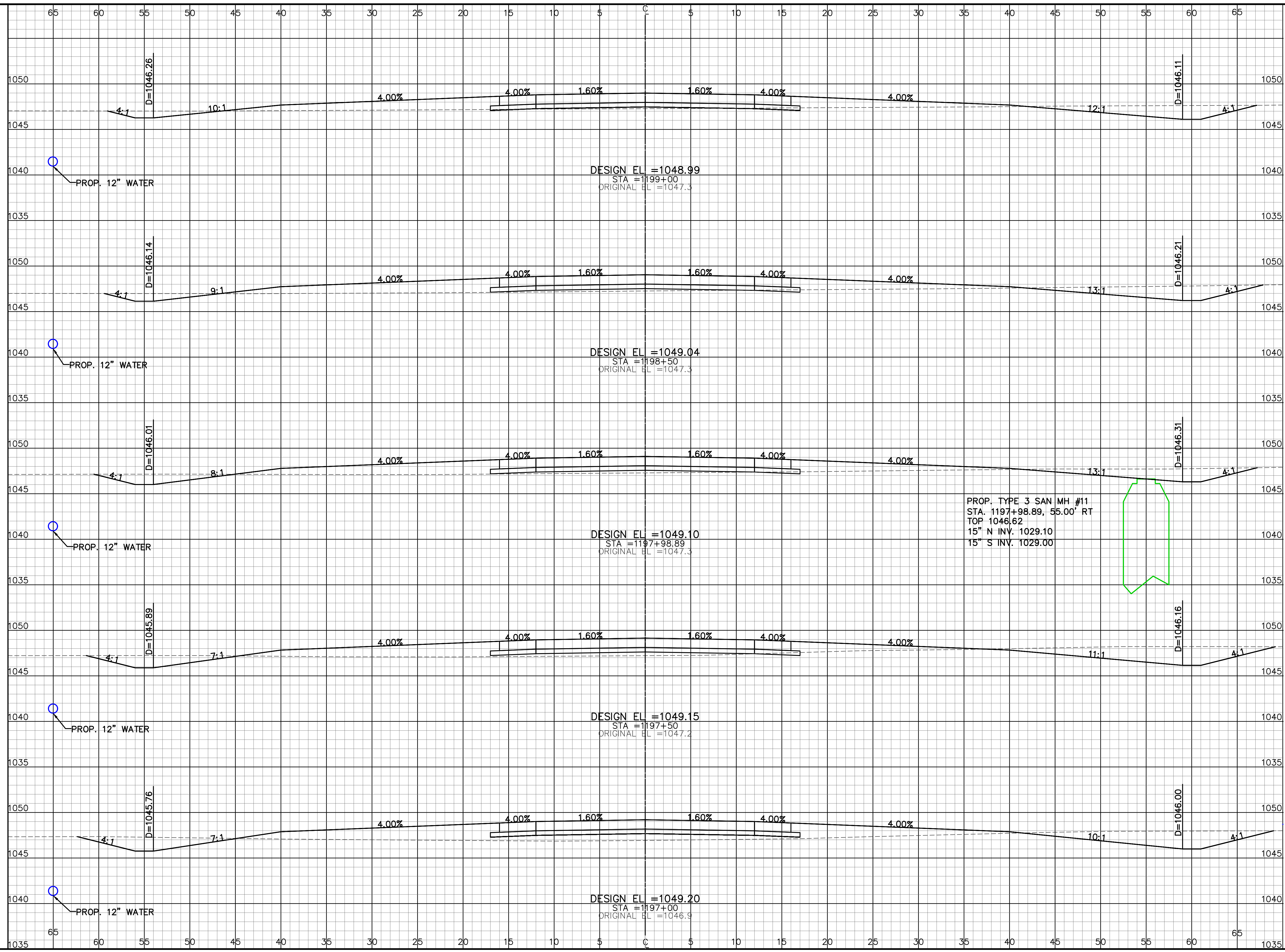


CALCULATED
JLB
CHECKED
NNS

BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1194+50 TO STA. 1196+50

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

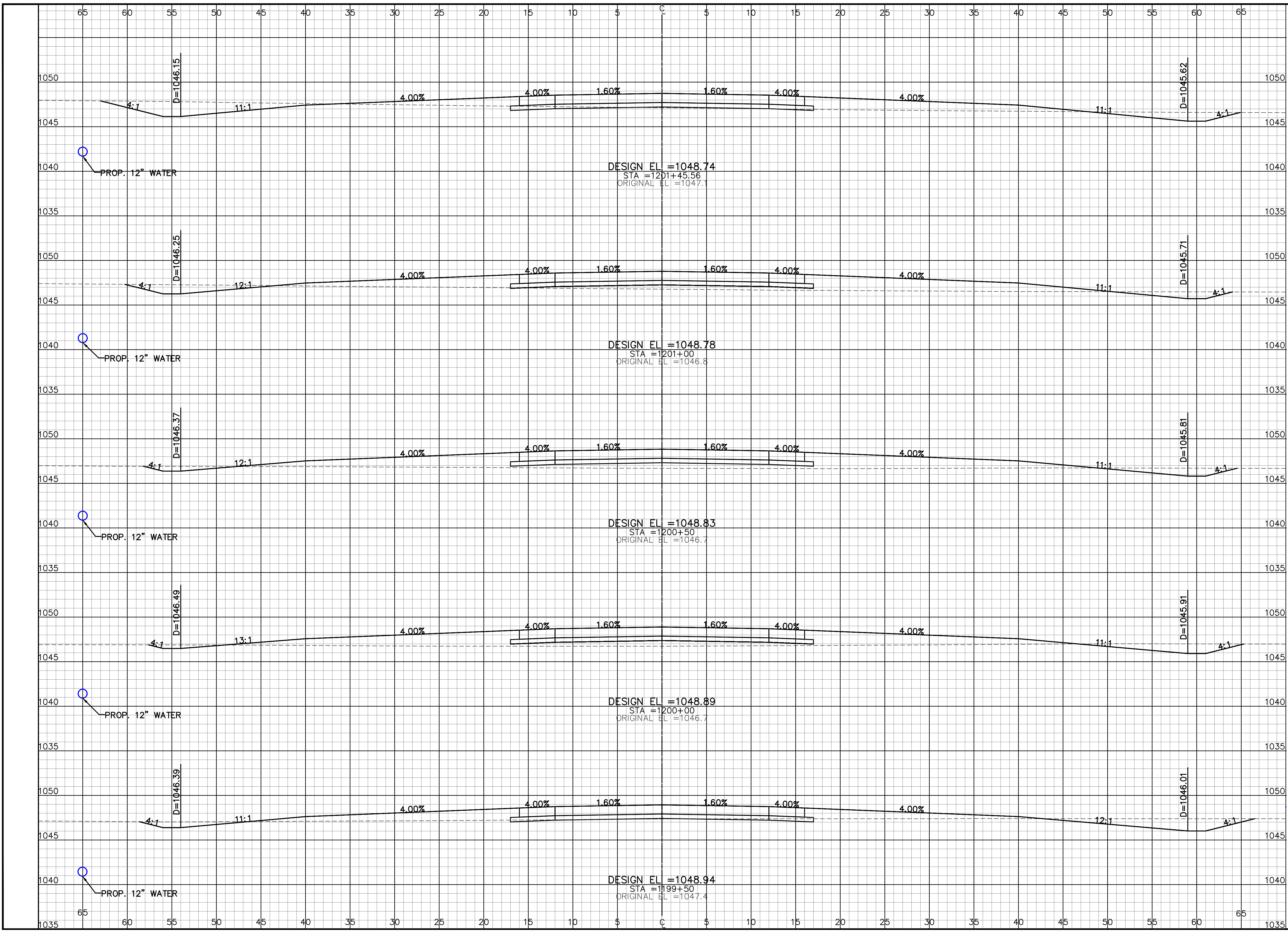


CALCULATED
JLB
CHECKED
NNS

**BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1197+00 TO STA. 1199+00**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

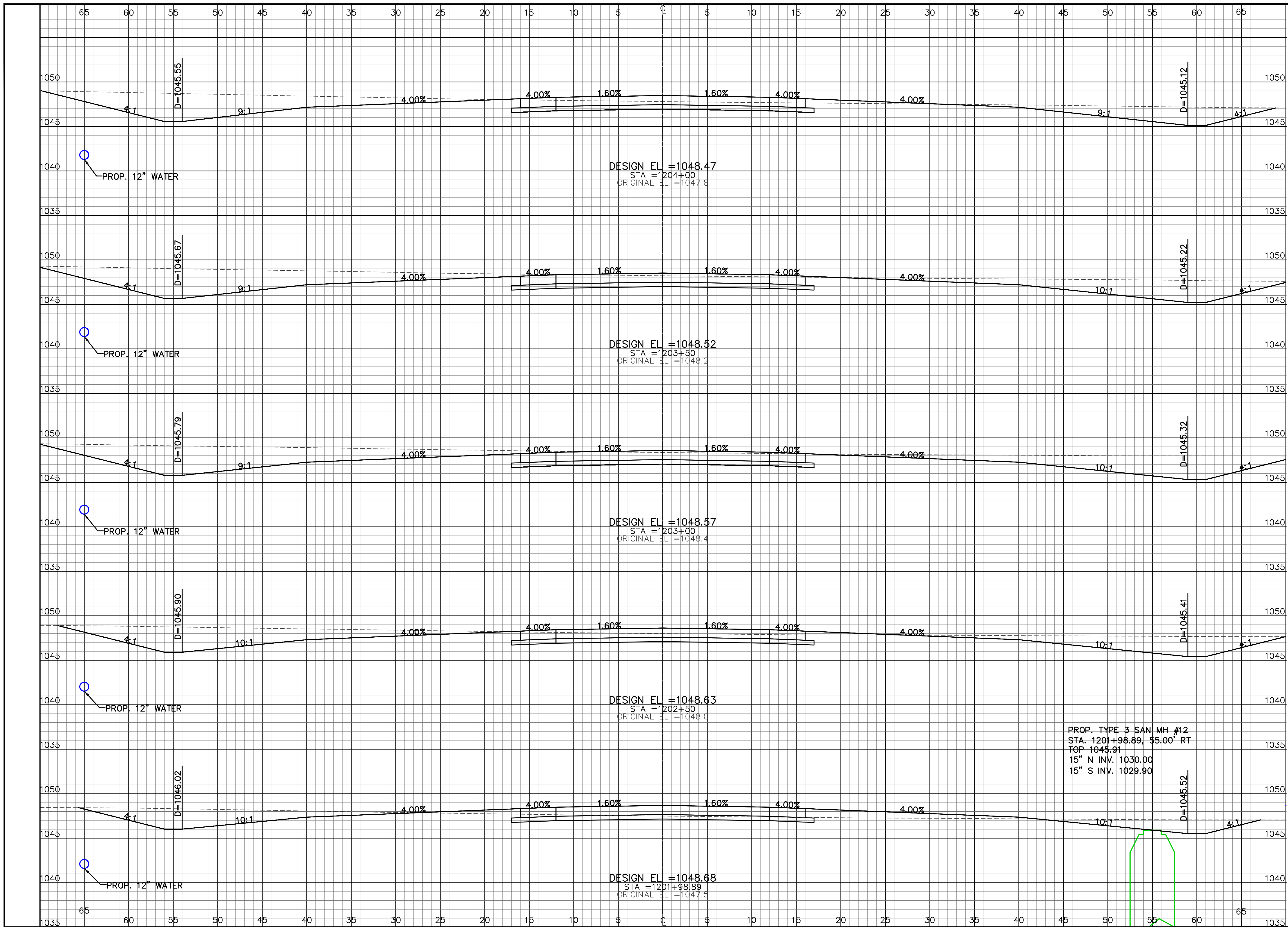


CALCULATED
JLB
CHECKED
NNS

BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1199+50 TO STA. 1201+45.56

APPROVED FOR CONSTRUCTION
 7-02-2020

BLUEGRASS BLVD. PHASE 1

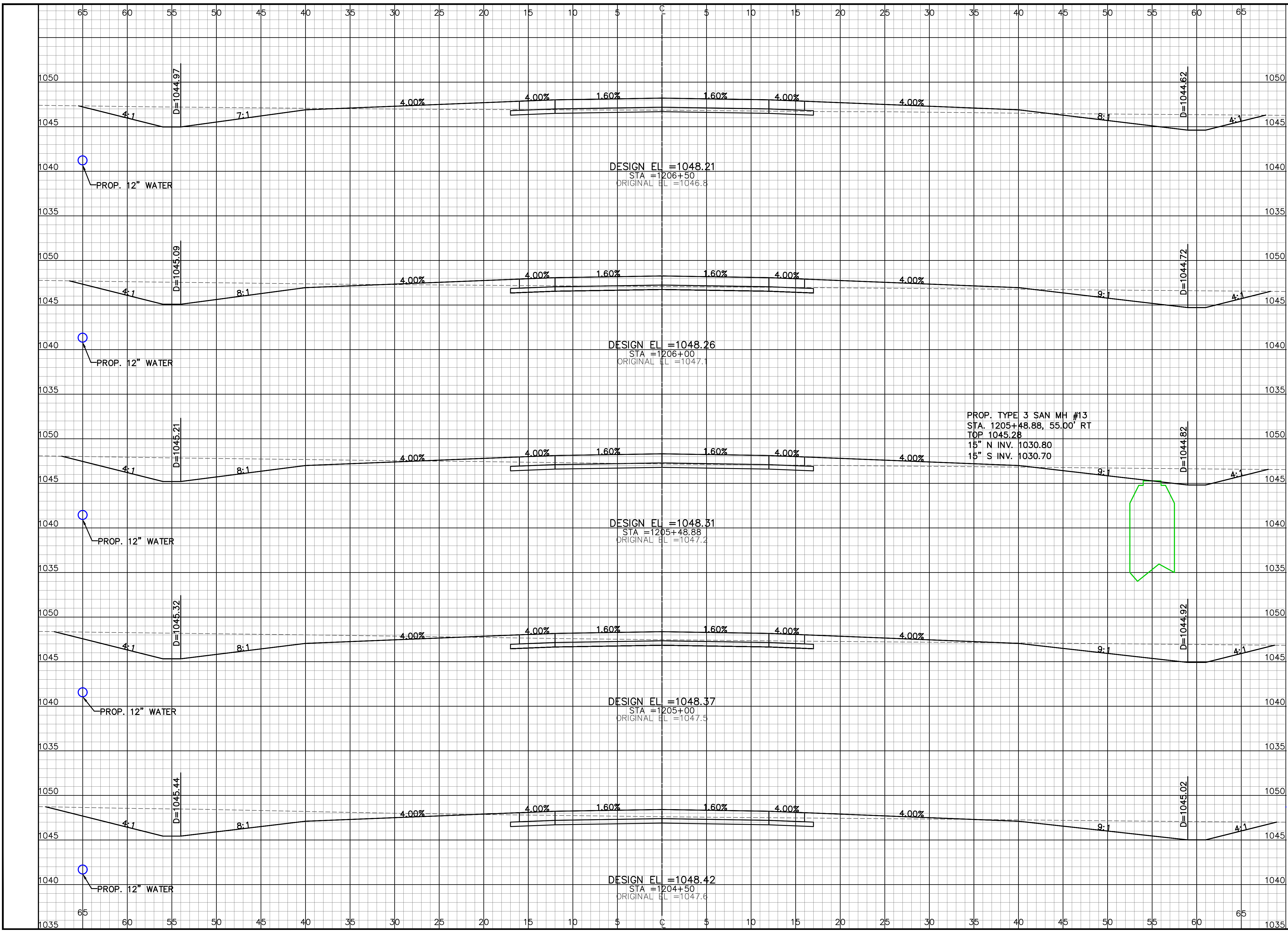


CALCULATED
JLB
CHECKED
NNS

BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1201+98.89 TO STA. 1204+00

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



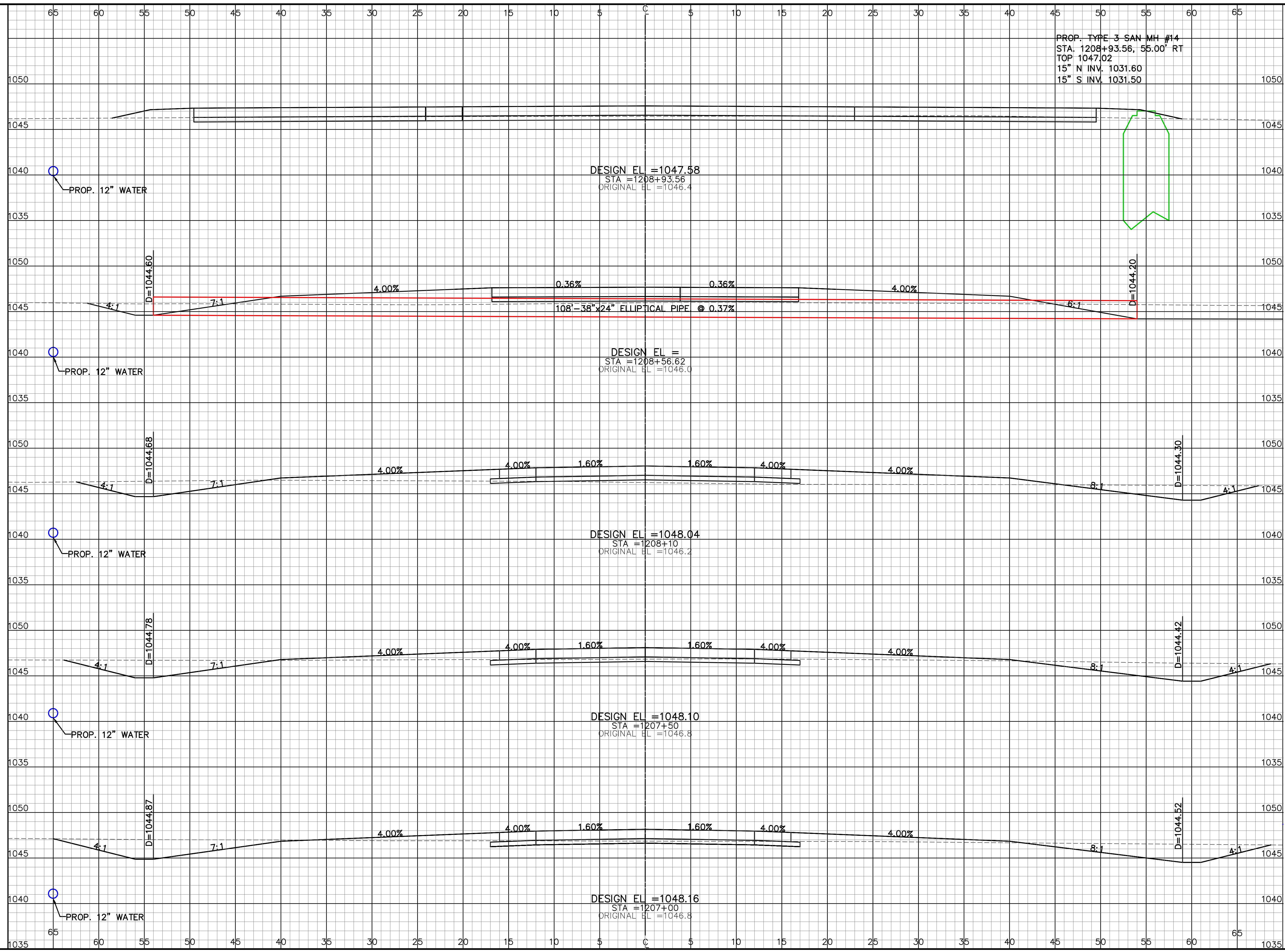
CALCULATED
JLB
CHECKED
NNS

**BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1204+50 TO STA. 1206+50**

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

PROP. TYPE 3 SAN MH #14
 STA. 1208+93.56, 55.00' RT
 TOP 1047.02
 15" N INV. 1031.60
 15" S INV. 1031.50

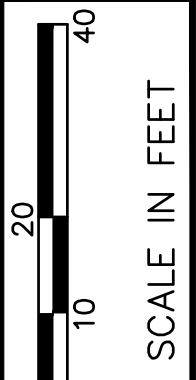
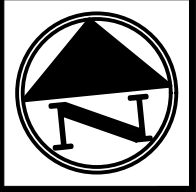


CALCULATED
 JLB
 CHECKED
 NNS

BLUEGRASS BOULEVARD CROSS SECTIONS
STA. 1207+00 TO STA. 1208+93.56

APPROVED FOR CONSTRUCTION
 7-02-2020

BLUEGRASS BLVD. PHASE 1

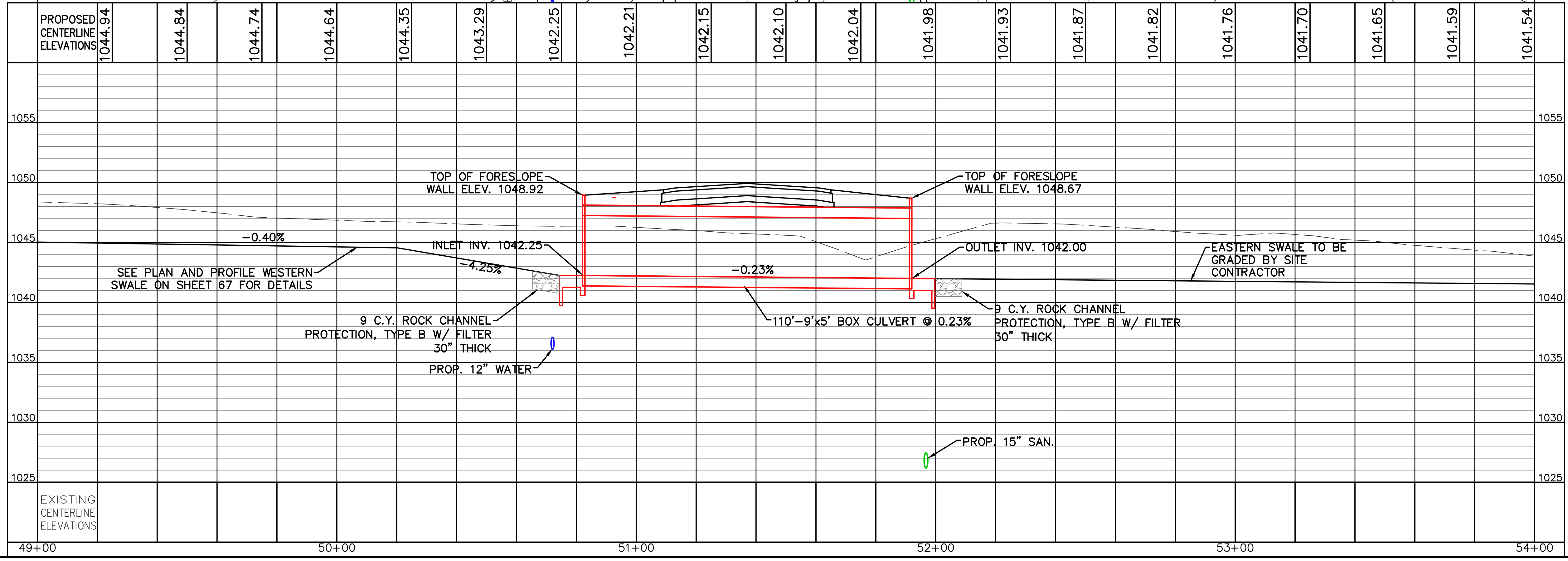
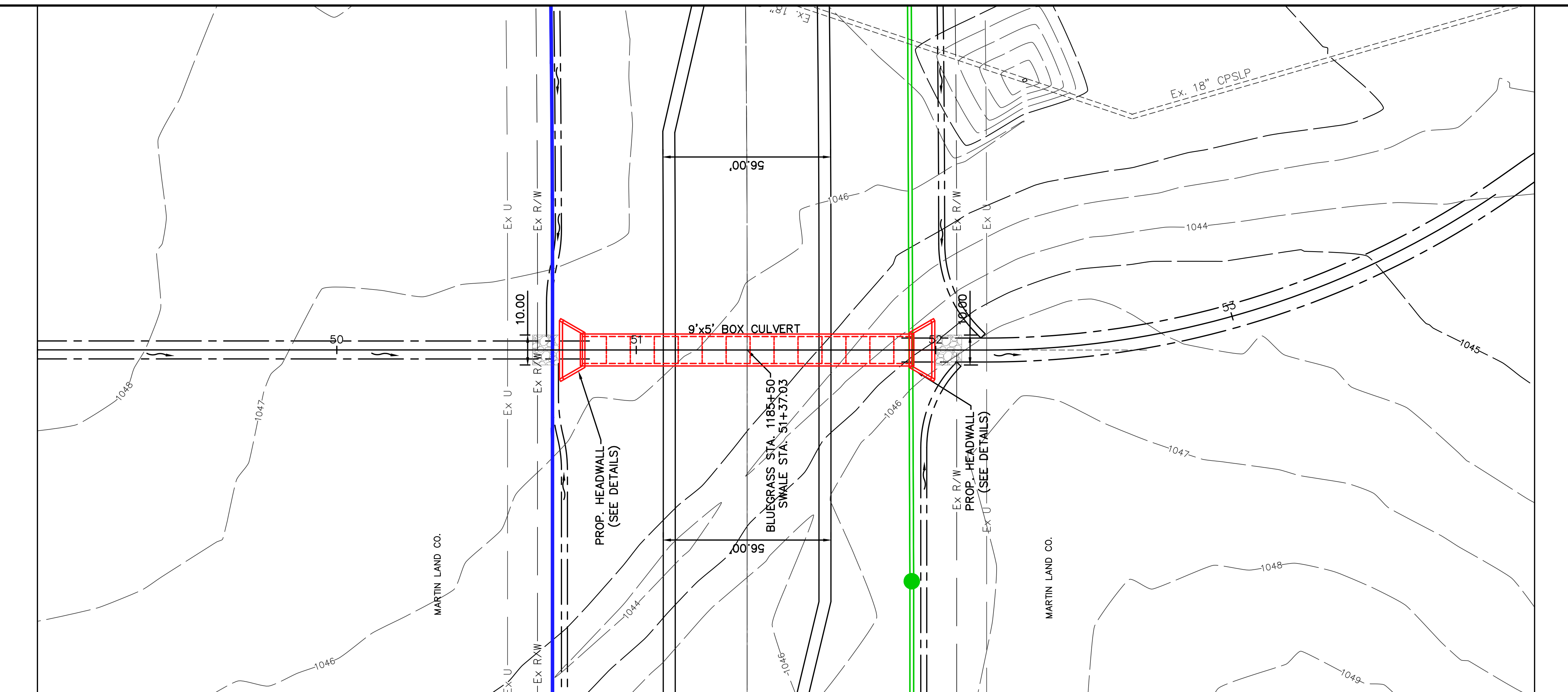


CALCULATED
JLB
CHECKED
NINS

PLAN AND PROFILE - CULVERT STA. 49+00 TO STA. 54+00

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



POROUS BACKFILL WITH FILTER FABRIC:

POROUS BACKFILL SHALL BE 1'-6" THICK AND BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. FURNISH POROUS BACKFILL CONSISTING OF GRAVEL OR STONE WITH A NO. 57 SIZE GRADATION ACCORDING TO TABLE 703.01-1. GEOTEXTILE FABRIC TYPE A SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

SEALING OF FORESLOPE WALL AND WINGWALLS:

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DETAIL ON SHEET 13.

WATERPROOFING:

TYPE 2 WATERPROOFING, PER CMS 512 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL.

IF PAVEMENT IS NOT PLACED DIRECTLY ON TOP OF THE CULVERT, TYPE 2 WATERPROOFING, PER CMS 512 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL.

IF PAVEMENT IS TO BE USED DIRECTLY ON TOP OF THE CULVERT, TYPE 3 WATERPROOFING, PER CMS 512 AND 711.29 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL.

WORKMANSHIP AND FINISH

THE SECTIONS MAY BE REPAIRED, IF NECESSARY, BECAUSE OF OCCASIONAL IMPERFECTIONS OR FRACTURES. REPAIRS SHALL BE MADE IN ACCORDANCE WITH ITEM 519. THE REPAIRS WILL BE ACCEPTABLE IF IN THE OPINION OF THE ENGINEER THE REPAIRS ARE SOUND, PROPERLY FINISHED AND CURED, AND THE REPAIRED SECTION CONFORMS TO THE REQUIREMENTS OF THESE NOTES.

CHAMFER

ALL EXPOSED CAST-IN-PLACE CONCRETE TO HAVE 3/4" CHAMFER

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR HEADWALL EXCAVATION, CHANNEL CLEAN OUT OR REALIGNMENT, EXCAVATION OF ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

INSTREAM WORK

INSTREAM WORK WILL BE LIMITED WHERE PRACTICABLE AND IF NECESSARY, ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR FORDS OR COFFERDAMS. ANY TEMPORARILY PLACED MATERIAL WILL BE REMOVED AND THE STREAM BOTTOM BE RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED.

JOINTS

JOINTS SHALL BE MORTARED ON THE TOP OUTSIDE SURFACE AND DOWN THE FULL LENGTH OF THE EXTERIOR SIDES TO PROVIDE A SMOOTH SURFACE FOR WATERPROOFING. THE MORTAR SHALL BE A NON-SHRINKING NON-METALLIC MORTAR HAVING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI ACCORDING TO THE CORPS OF ENGINEERS SPECIFICATION CRD-C621 WHEN PREPARED TO A MODERATE FLUIDITY (124-145% @ 5 DROPS). THE MORTAR OR GROUT SHALL ALSO MEET ALL OTHER REQUIREMENTS OF SPECIFICATION CRD-C621. THE MORTAR SHALL BE PREPARED, PLACED AND CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. BEFORE MORTARING THE JOINT SHALL BE THOROUGHLY CLEAN OF ALL DIRT, DUST AND OTHER FOREIGN MATTER. THE SURFACES SHALL BE WETTED, BUT NO FREE WATER SHALL BE ALLOWED TO REMAIN IN THE KEYWAY.

JOINTS SHALL ALSO BE MORTARED ON THE BOTTOM INSIDE SURFACE AND HALFWAY UP THE INSIDE WALLS TO PROVIDE A SMOOTH SURFACE FOR WATER FLOW. THE REMAINDER OF THE INSIDE JOINTS (SIDES AND TOP) SHALL BE FILLED WITH AN EXPANSIVE FOAM MATERIAL (AEROSOL CAN VARIETY) AVAILABLE AT LOCAL SUPPLY STORES.

THE RECESSED AREAS ON THE TOP OF THE BOX CULVERT SECTIONS WHERE THE LIFTING INSERTS ARE LOCATED SHALL BE MORTARED WITH THE SAME MORTAR AS IS USED FOR THE JOINTS. THE FINISHED AREA SHOULD BE A SMOOTH SURFACE FOR WATERPROOFING.

INSPECTION

THE QUALITY OF MATERIALS, THE PROCESS OF MANUFACTURE AND THE FINISHED SECTIONS SHALL BE SUBJECT TO INSPECTION BY THE ENGINEER. SECTIONS MAY BE SUBJECT TO REJECTION FOR FAILURE TO CONFORM TO ANY OF THE REQUIREMENTS IN THESE NOTES. INDIVIDUAL SECTIONS MAY BE REJECTED BECAUSE OF ANY OF THE FOLLOWING:

FRACTURES OR CRACKS PASSING THROUGH THE WALL, EXCEPT FOR A SINGLE END CRACK THAT DOES NOT EXCEED ONE HALF THE THICKNESS OF THE WALL.

DEFECTS THAT INDICATE PROPORTIONING, MIXING AND MOLDING NOT IN COMPLIANCE WITH THESE NOTES.

HONEYCOMBED OPEN TEXTURE.

EXPOSED REINFORCING STEEL.

DAMAGED ENDS OR LEGS WHERE SUCH DAMAGE WOULD PREVENT MAKING A SATISFACTORY JOINT.

INSTALLED SECTIONS THAT HAVE CRACKS EXCEEDING 0.01 INCH IN WIDTH SHALL BE APPRAISED BY THE ENGINEER CONSIDERING THE STRUCTURAL INTEGRITY OR SERVICE LIFE OF THE STRUCTURE. SUCH CRACKS ARE NOT ACCEPTABLE IF THEY ARE EXCESSIVE IN NUMBER OR IF THEY RESULT FROM CARELESS HANDLING OR INSTALLATION. ALL CRACKS OVER 0.10 INCH WIDTH SHALL BE SEALED USING A METHOD APPROVED BY THE ENGINEER.

THE ENGINEER MAY REJECT ANY SECTION IF, IN THE ENGINEER'S OPINION, THE STRUCTURAL INTEGRITY OR SERVICE LIFE OF THE SECTION HAS BEEN REDUCED DUE TO MATERIALS, MANUFACTURE OR INSTALLATION.

MISCELLANEOUS

THE BOX CULVERT SHALL BE MANUFACTURED SO THAT THERE IS ONE BLUNT END SECTION AT EACH END AFTER THE CULVERTS HAVE BEEN SET IN PLACE. THESE BLUNT END SECTIONS WILL ALLOW FOR EASIER ATTACHMENT OF THE ANCHOR BOLTS AND WINGWALLS TO THE BOX CULVERT.

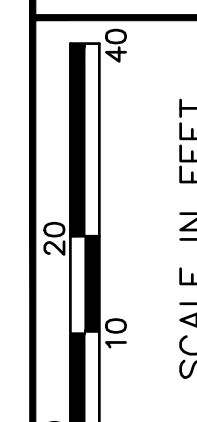
ALL EXPOSED CONCRETE SURFACES SUCH AS HEADWALLS AND WINGWALLS SHALL BE COVERED WITH A CONCRETE EPOXY SEALER, THE COLOR SHALL BE "LIGHT NEUTRAL" FEDERAL COLOR #17778.

BEDDING NOTE:

PROPOSED CULVERT SHALL SIT ON A MINIMUM OF 6" OF BEDDING. BEDDING SHALL BE ODOT 703.11 TYPE 3, (#57) AGGREGATE.

PRECAST BOX CULVERT NOTE:

PROPOSED BOX CULVERT SHALL BE IN ACCORDANCE WITH ASTM C-1577.

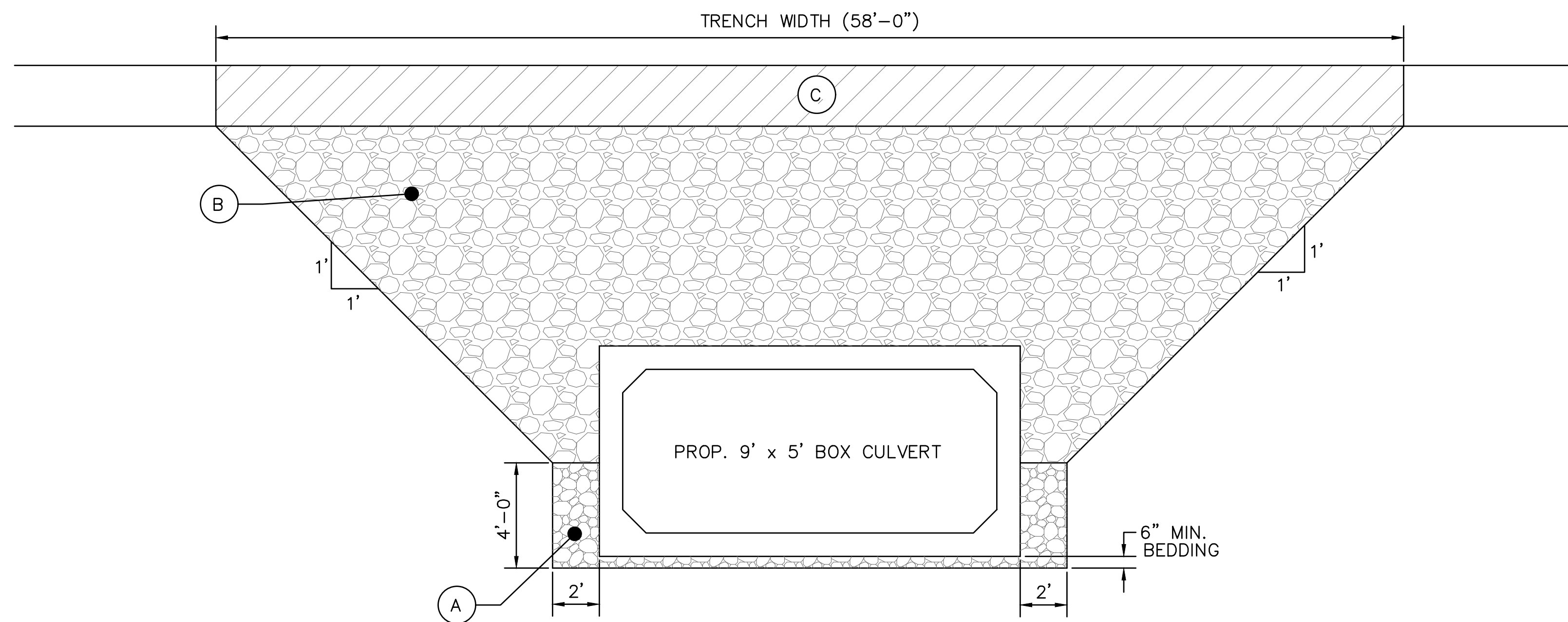


CALCULATED	JLB	CHECKED	NNS
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BOX CULVERT DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

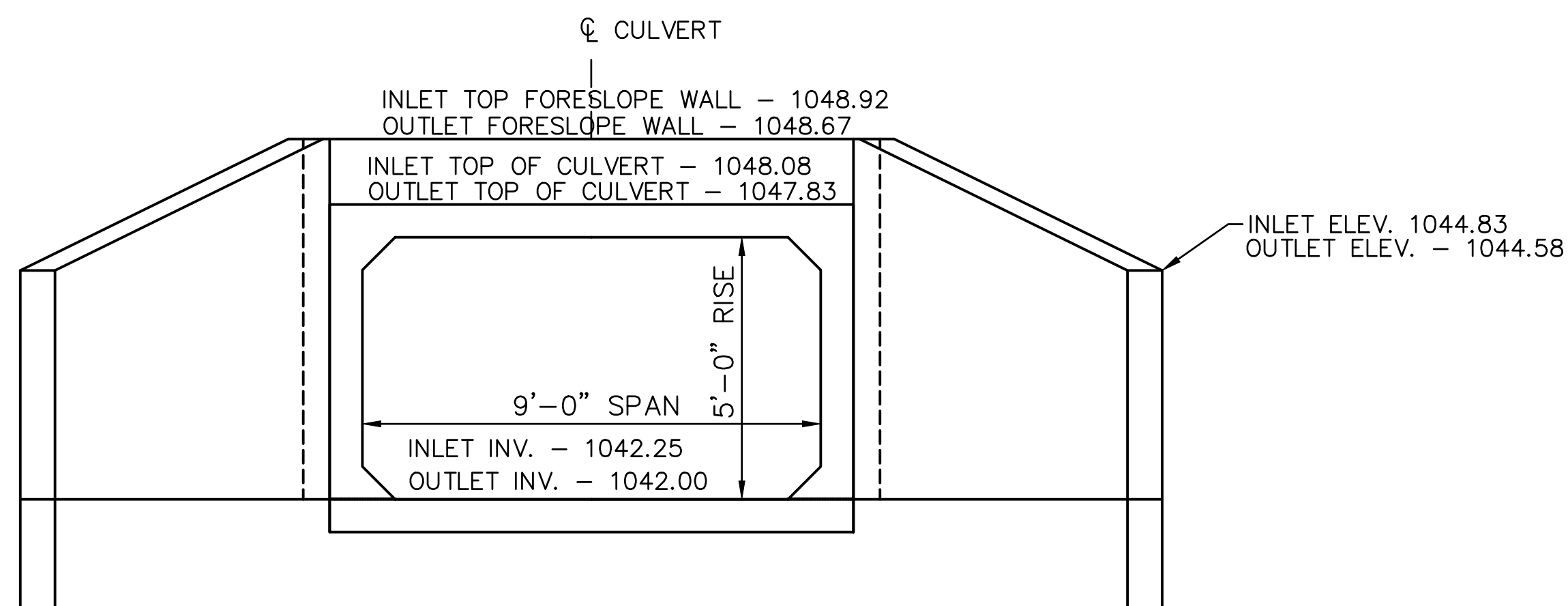


BOX CULVERT TRENCH DETAIL

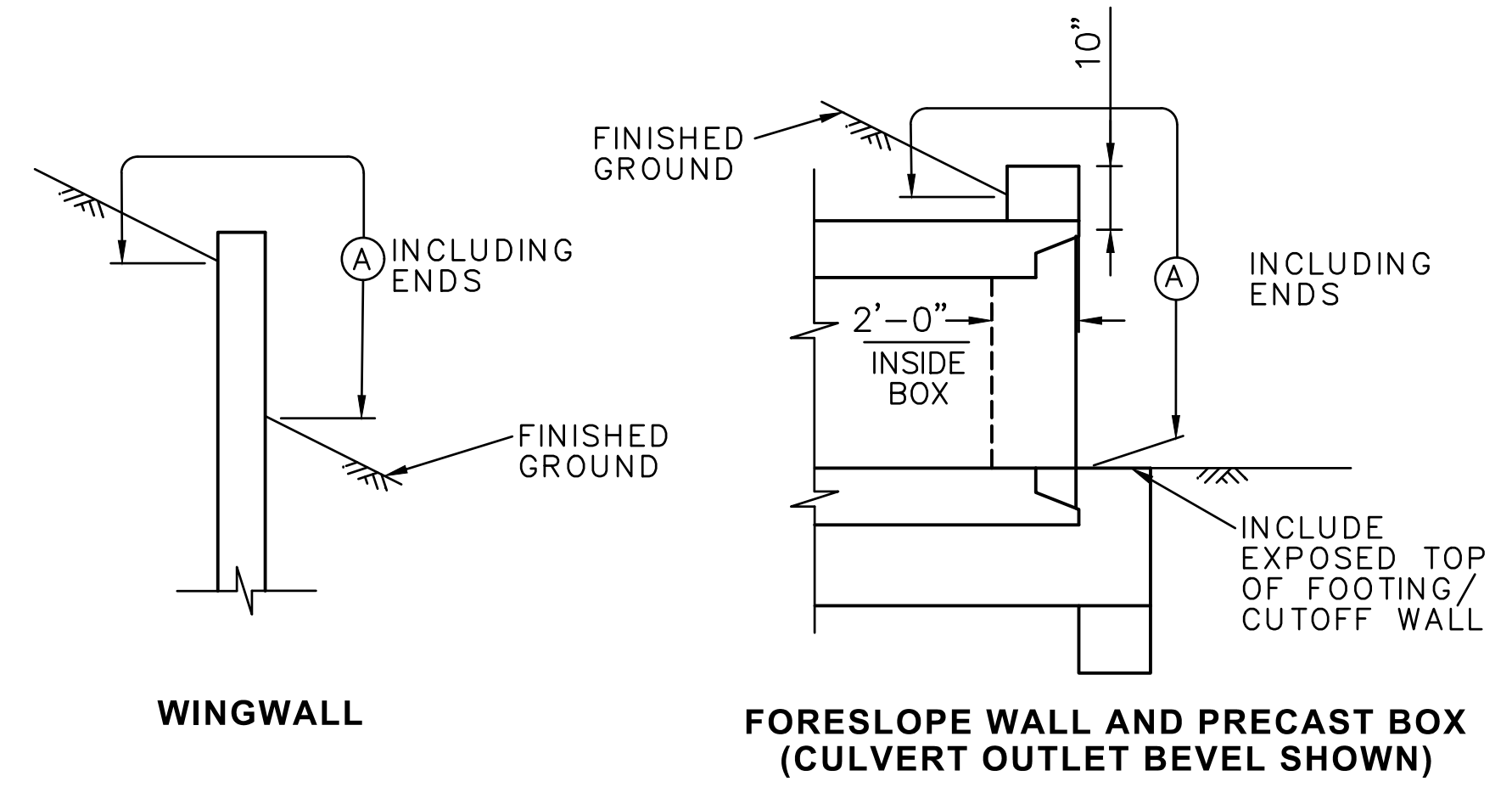
- (A) **STRUCTURAL BEDDING**
SHALL PER ODOT 703.11, TYPE 3, #57 AGGREGATE.
- (B) **STRUCTURAL BACKFILL**
ALL TRENCHES IN "OFF-PAVEMENT" AREAS OR AREAS OUTSIDE OF PROPOSED OR ASPHALT PAVEMENT OR GRAVEL PAVEMENT CAN BE COMPACTED EXISTING NATIVE MATERIAL IN 12" MAXIMUM LIFTS. NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONE, ROCKS, ETC., GREATER THAN 3" DIAMETER.

ALL TRENCHES LOCATED "IN-PAVEMENT" AREAS SHALL BE COMPACTED WITH STRUCTURAL BACKFILL MATERIAL PER ODOT 703.11, TYPE 1 (304) OR TYPE 3, #57 AGGREGATE.
- (C) **FINISH GRADE**
ALL "OFF-PAVEMENT" AREAS SHALL BE PROVIDED WITH A MINIMUM OF 6" OF TOPSOIL OVER THE COMPACTED MATERIAL AND THEN SEEDED AND MULCHED PER ODOT ITEM 659.

ALL "IN-PAVEMENT" AREAS SHALL FOLLOW THE CORRESPONDING PAVEMENT REPAIR HATCH SHOWN IN THE PLANS.



**INLET/OUTLET ELEVATIONS
NOT TO SCALE**

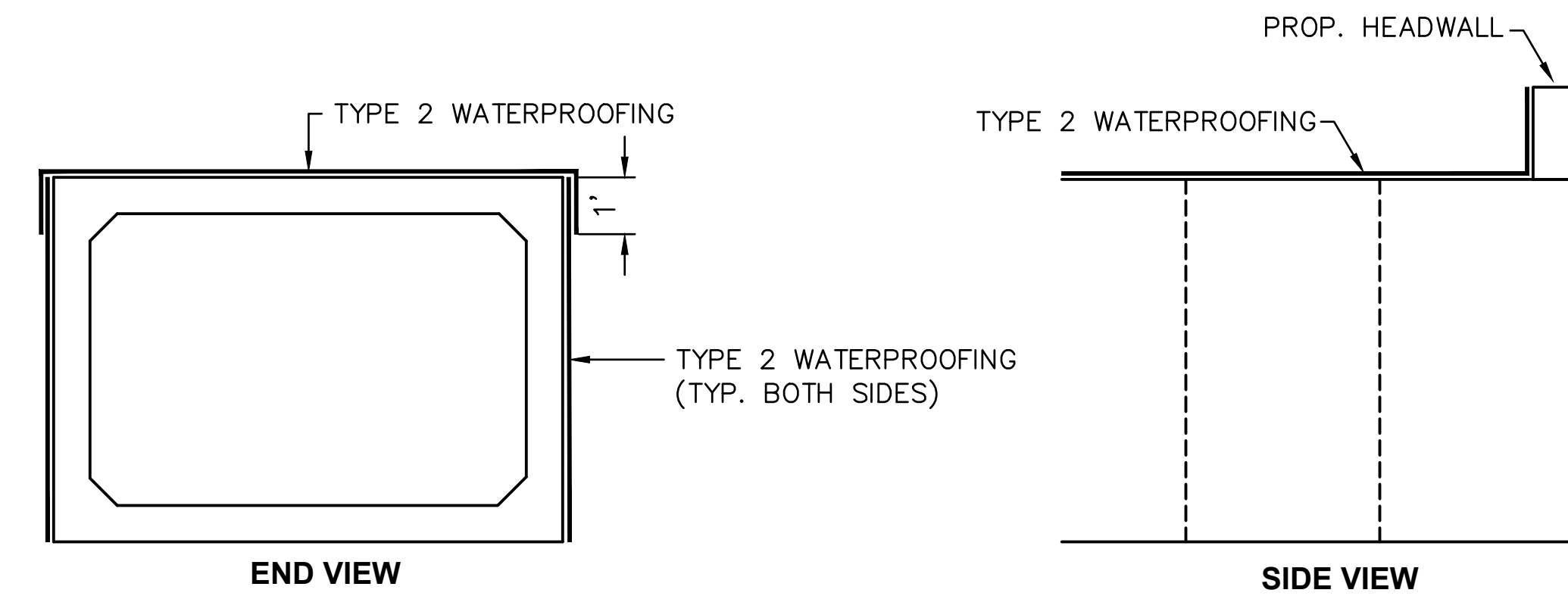


WINGWALL

**FORESLOPE WALL AND PRECAST BOX
(CULVERT OUTLET BEVEL SHOWN)**

(A) - SEAL ENTIRE CONCRETE SURFACE AREA
DETAIL SHOWS THE LIMITS OF ITEM 512-SEALING CONCRETE SURFACES
COLOR SHALL BE "LIGHT NEUTRAL" FEDERAL COLOR #17778.

CONCRETE SEALING DETAIL



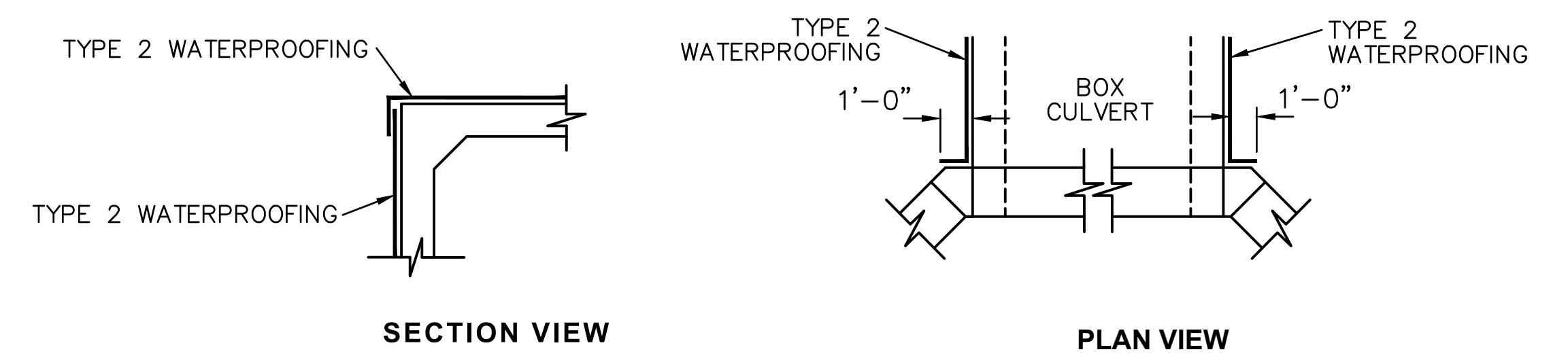
END VIEW

SIDE VIEW

MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL BE PROVIDED ON THE SIDES OF THE CULVERT FOR THE FULL LENGTH OF THE CULVERT AND OVERLAP WINGWALLS 1'-6".

MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL BE PROVIDED ON THE TOP SURFACE AND 1'-0" DOWN EACH SIDE OF THE CULVERT FOR THE FULL LENGTH OF THE CULVERT. IT SHALL ALSO OVERLAP HEADWALL FOR ITS FULL HEIGHT.

TYPICAL CULVERT SECTION VIEWS



SECTION VIEW

PLAN VIEW

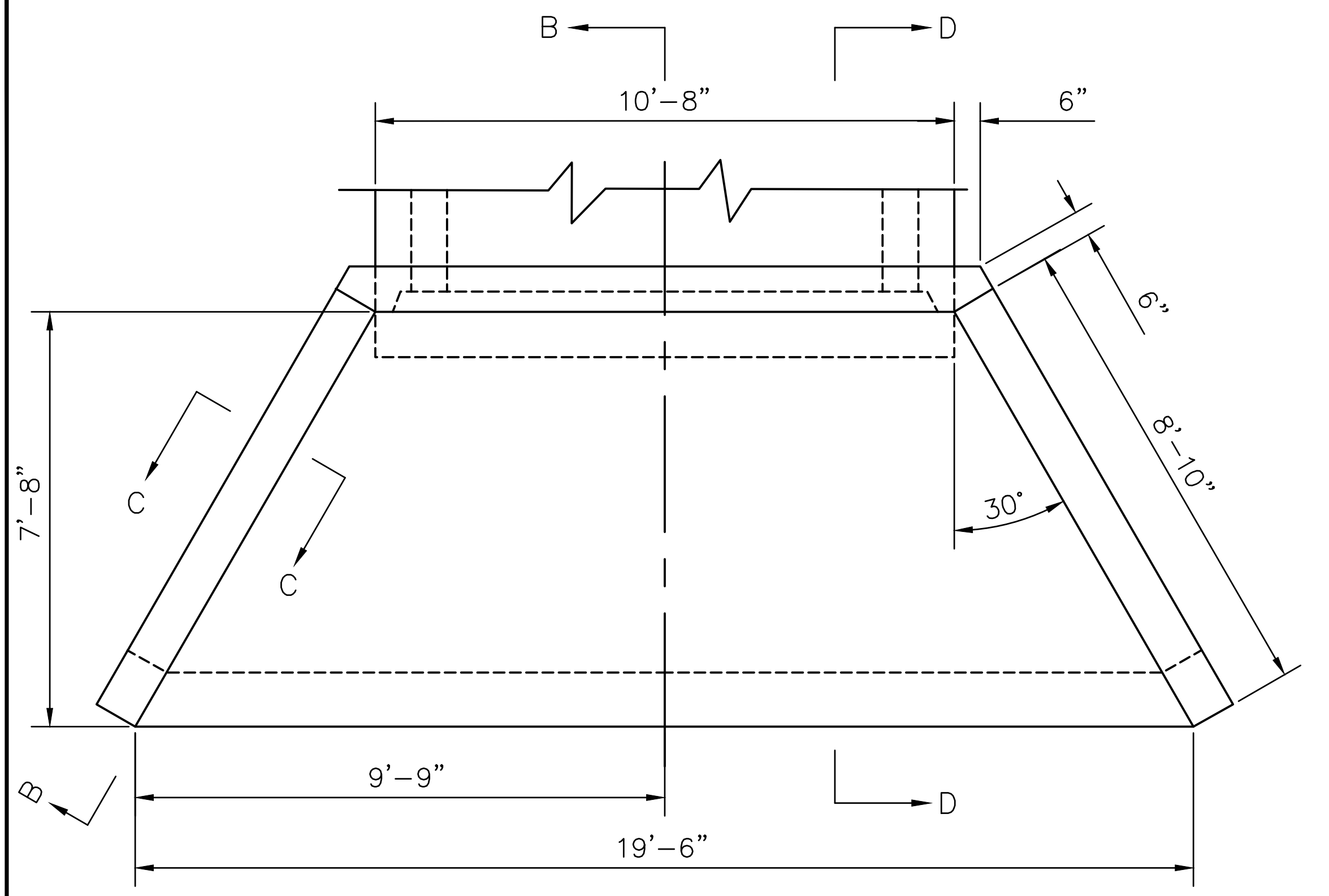
WATERPROOFING DETAILS

0	10	20	40
SCALE IN FEET			
CALCULATED	JLB	CHECKED	NNS

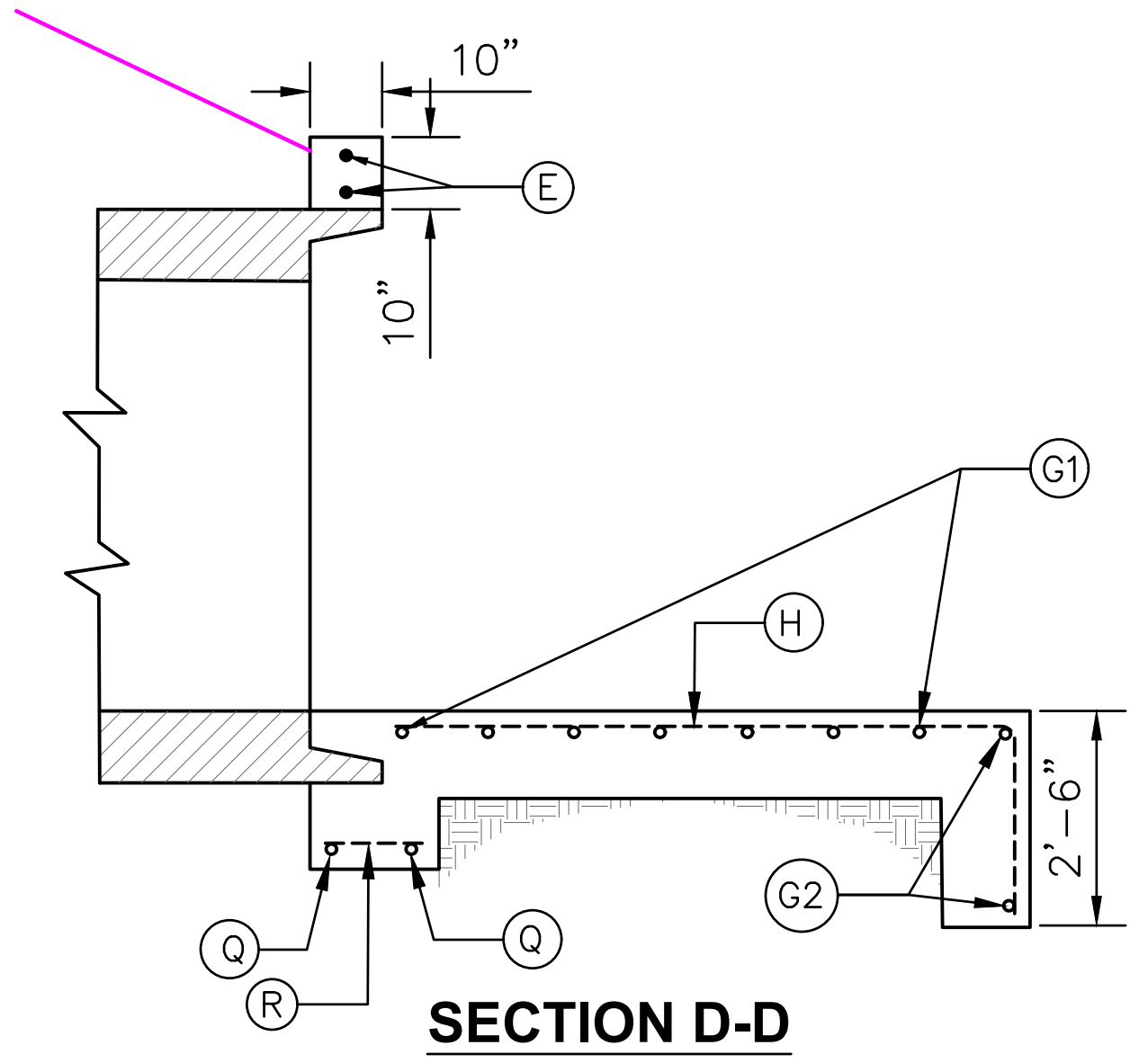
BOX CULVERT DETAILS

APPROVED FOR CONSTRUCTION
7-02-2020

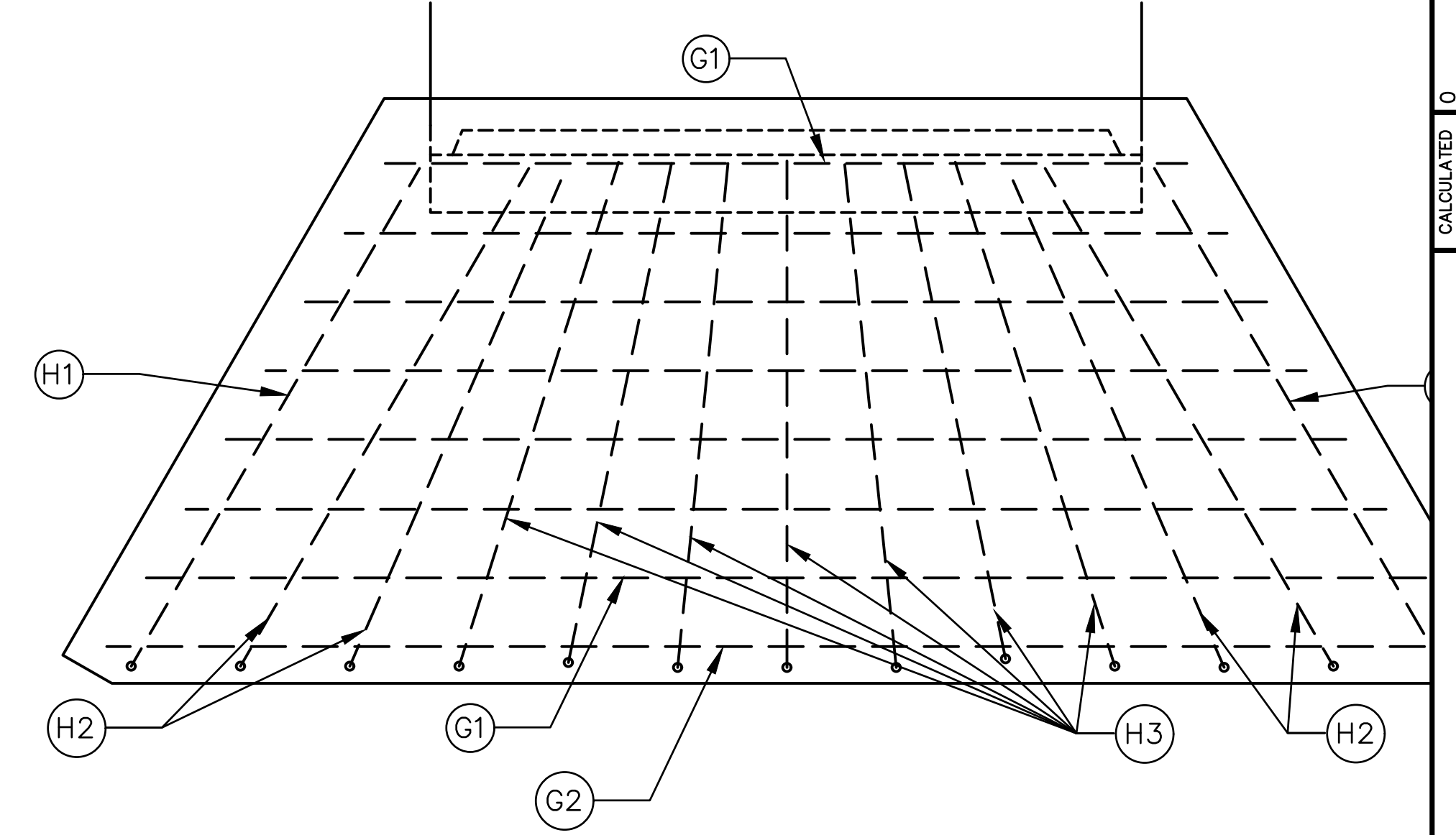
BLUEGRASS BLVD. PHASE 1



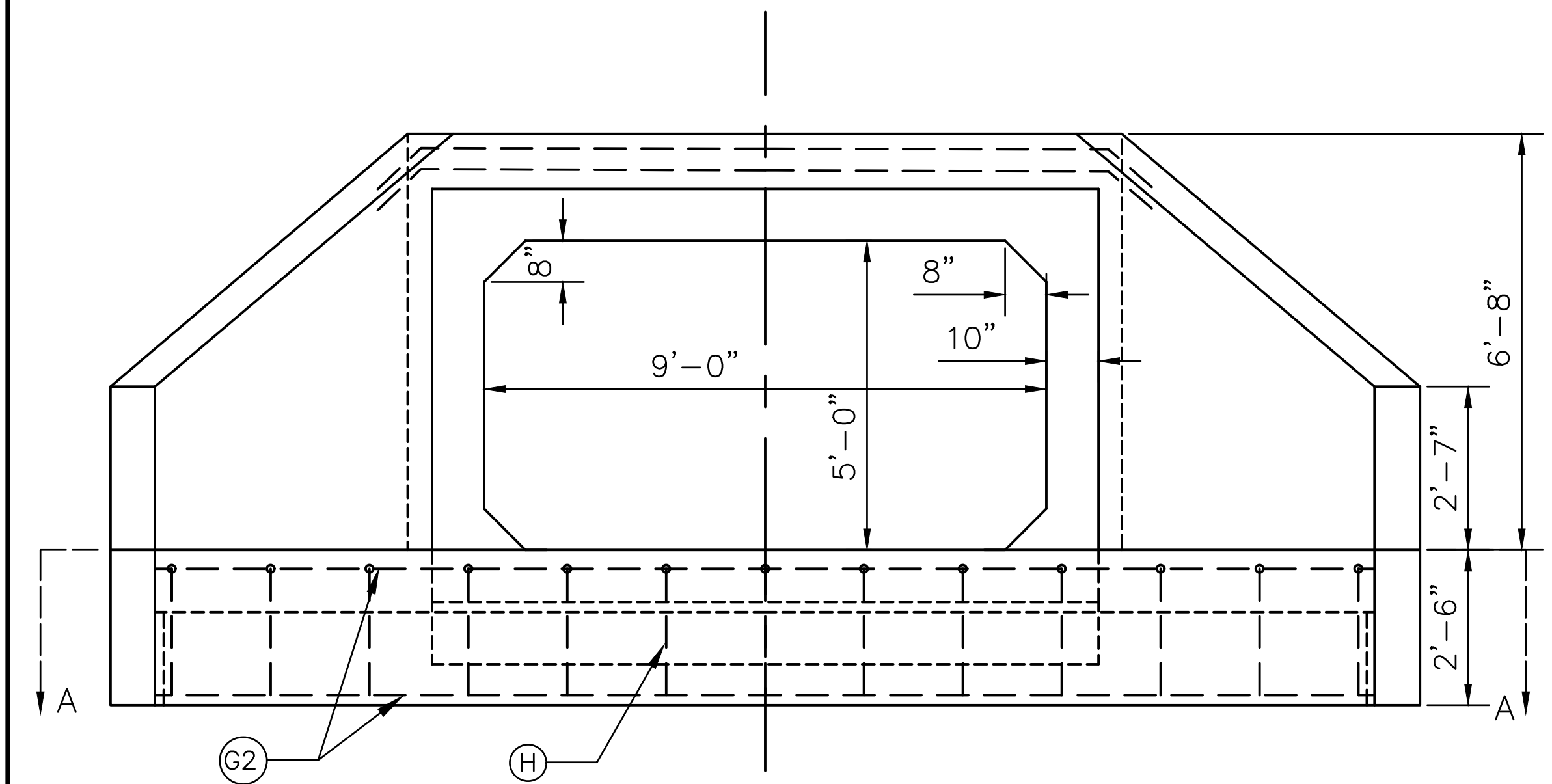
PLAN VIEW



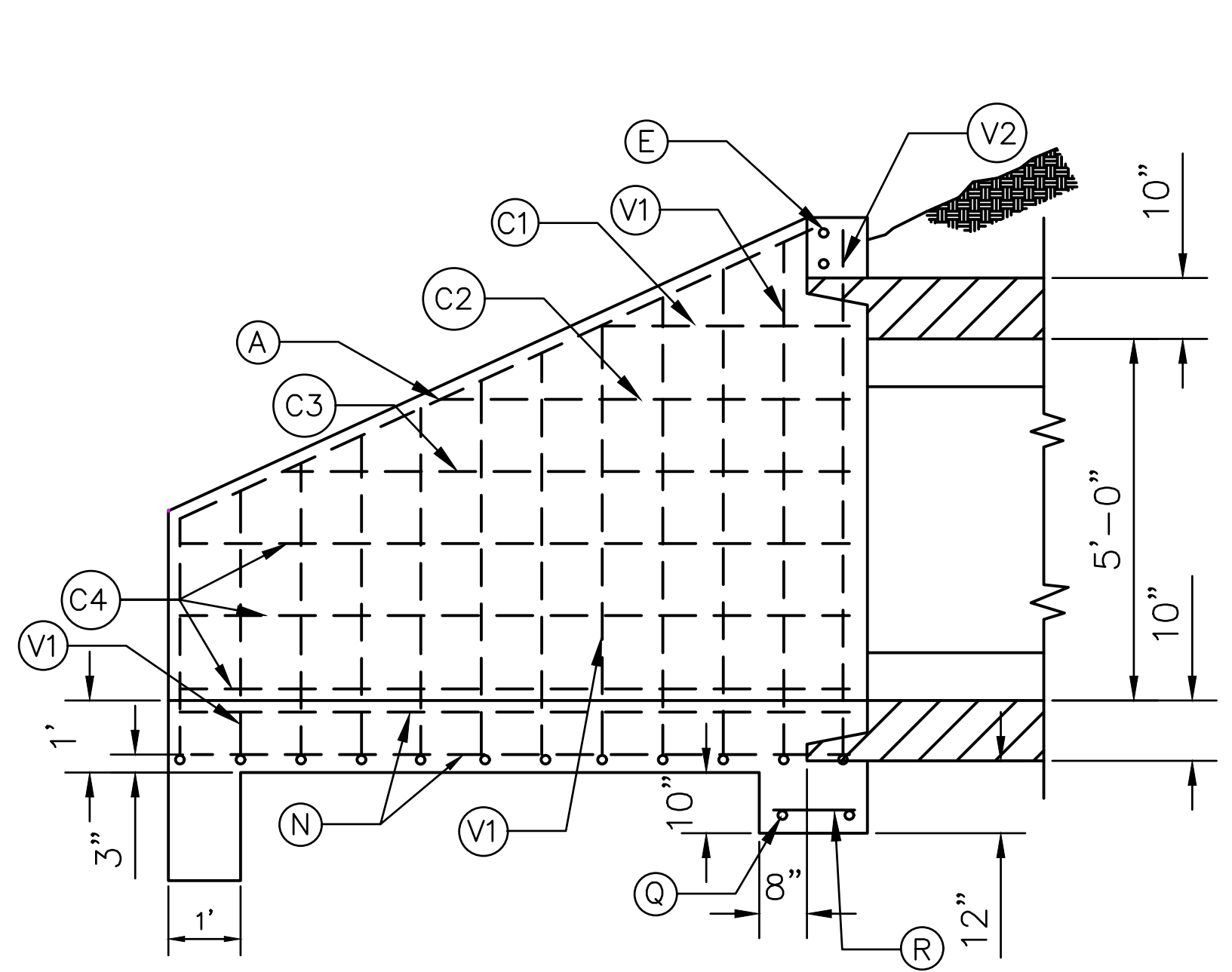
SECTION D-D



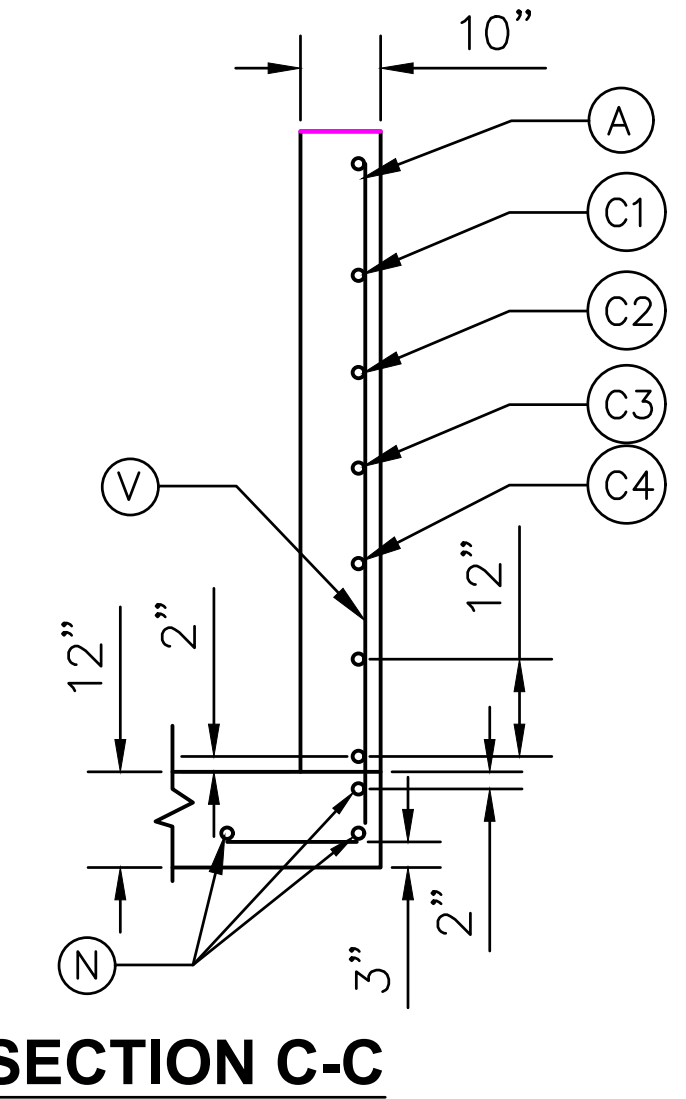
SECTION A-A



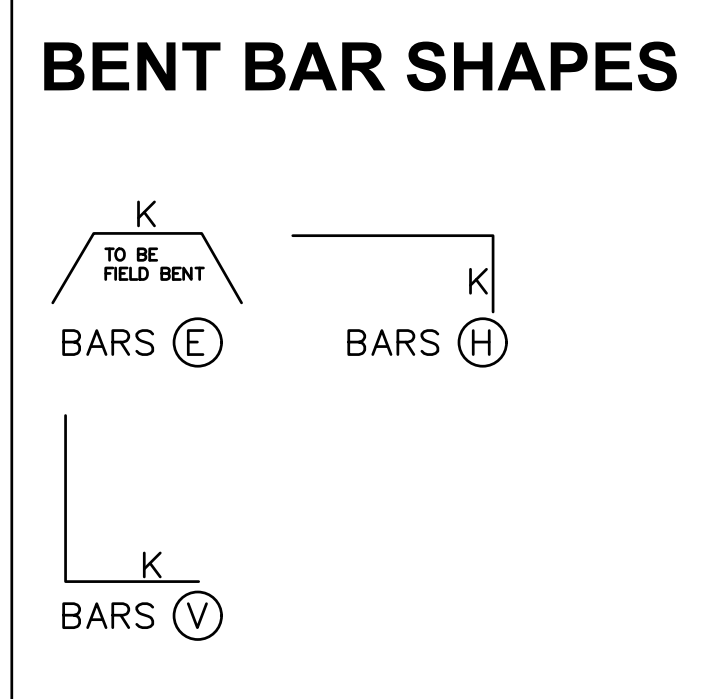
FRONT ELEVATION



SECTION B-B



SECTION C-C

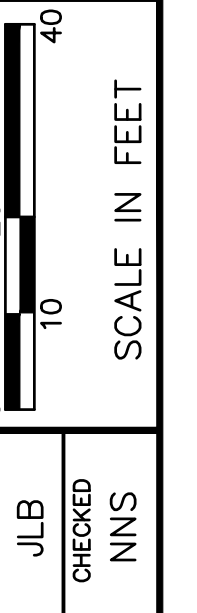


MARK	SIZE	NO. ①	LENGTH		K	
			FT	IN	FT	IN
A	5	2	9	7		
C1	4	2	3	5		
C2	4	2	5	7		
C3	4	2	7	10		
C4	4	6	9	3		
E	5	2	15	11	10	11
G1	5	7	*	*		
G2	5	2	19	8		
H1	5	2	10	4	2	0
H2	5	4	9	8	2	0
H3	5	7	9	4	2	0
N	5	6	8	6		
Q	5	2	10	4		
R	5	13	1	2		
V1	6	22	①	①	1	6
V2	6	2	8	9	1	6

* 1 SERIES OF 7 BARS LENGTH FROM 11'-6" TO 18'- VARIES 1'-2"
 ① 2 SERIES OF 11 BARS LENGTH FROM 4'-10" TO 8'- VARIES 4.5"

DRAWING NOTES

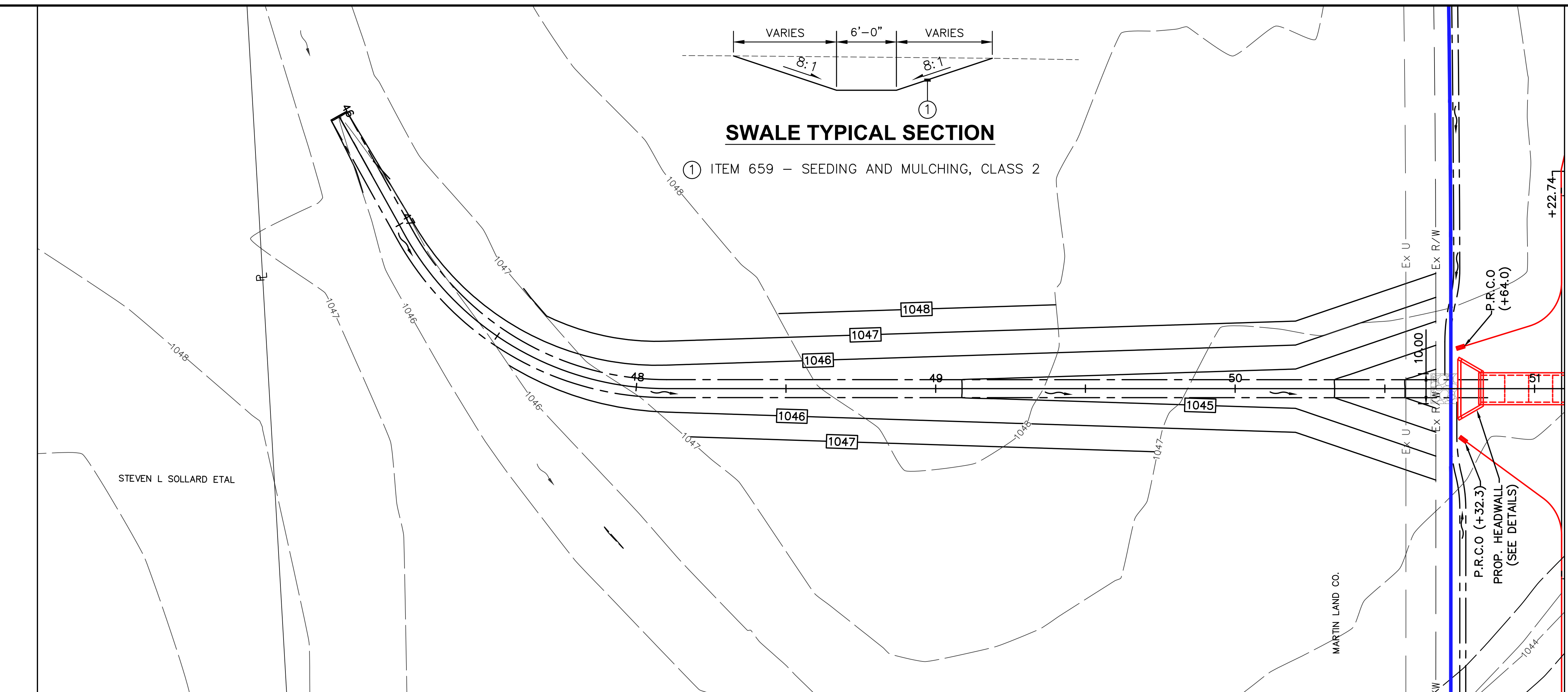
- DIMENSIONS FROM FACE OF CONCRETE TO STEEL SHALL BE 2" CLEAR DISTANCE EXCEPT IN SLAB AND CUTOFF WALL WHICH SHALL BE 3".
- ENCIRCLED LETTERS, ○, INDICATE REINFORCING STEEL.
- BARS (C) AND (E) ARE SPACED 1'-0" O.C. ALL OTHERS SHALL BE SPACED EVENLY.
- BARS (V) ARE SPACED 0'-10" O.C. AND PLACED IN ORDER OF INCREASING LENGTHS, BEGINNING AT THE END OF EACH WING.
- BARS (C) ARE PLACED IN ORDER OF INCREASING LENGTHS, BEGINNING AT THE END OF EACH WING.
- NUMBER OF BARS IS FOR ONE HEADWALL.
- DIMENSIONS ARE O. TO O. OF BARS.
- ALL BARS ARE STRAIGHT EXCEPT FOR THOSE SHOWN IN THE BAR CHART.
- NO DEDUCTIONS MADE FOR BENT STEEL.
- CONCRETE SHALL BE CLASS QC1. REINFORCING STEEL SHALL BE GRADE 60, EPOXY COATED STEEL.
- /// DENOTES LIMITS OF APRON.
- PAVING SHALL BE REQUIRED AND SHALL BE SLOPED IN DIRECTION OF FLOW EQUAL TO SLOPE OF BOX. FRONT FACE OF HEADWALL AND ENDS OF WINGS SHALL REMAIN VERTICAL.
- 9.7 C.Y. ITEM 602 (CONCRETE MASONRY) PER HEADWALL.



BOX CULVERT DETAILS

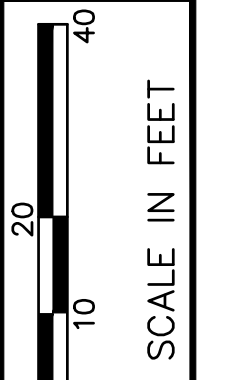
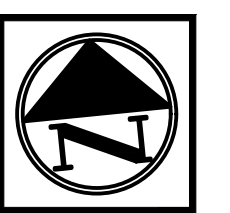
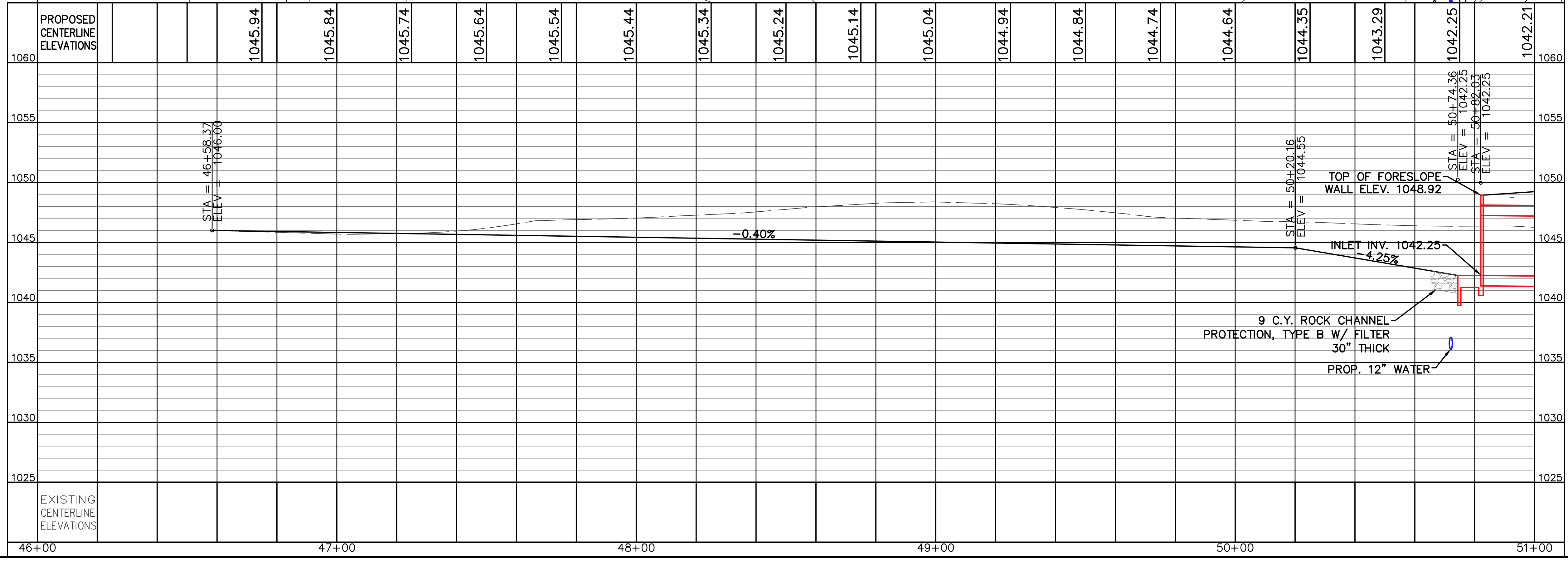
APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1



SWALE TYPICAL SECTION

① ITEM 659 - SEEDING AND MULCHING, CLASS 2



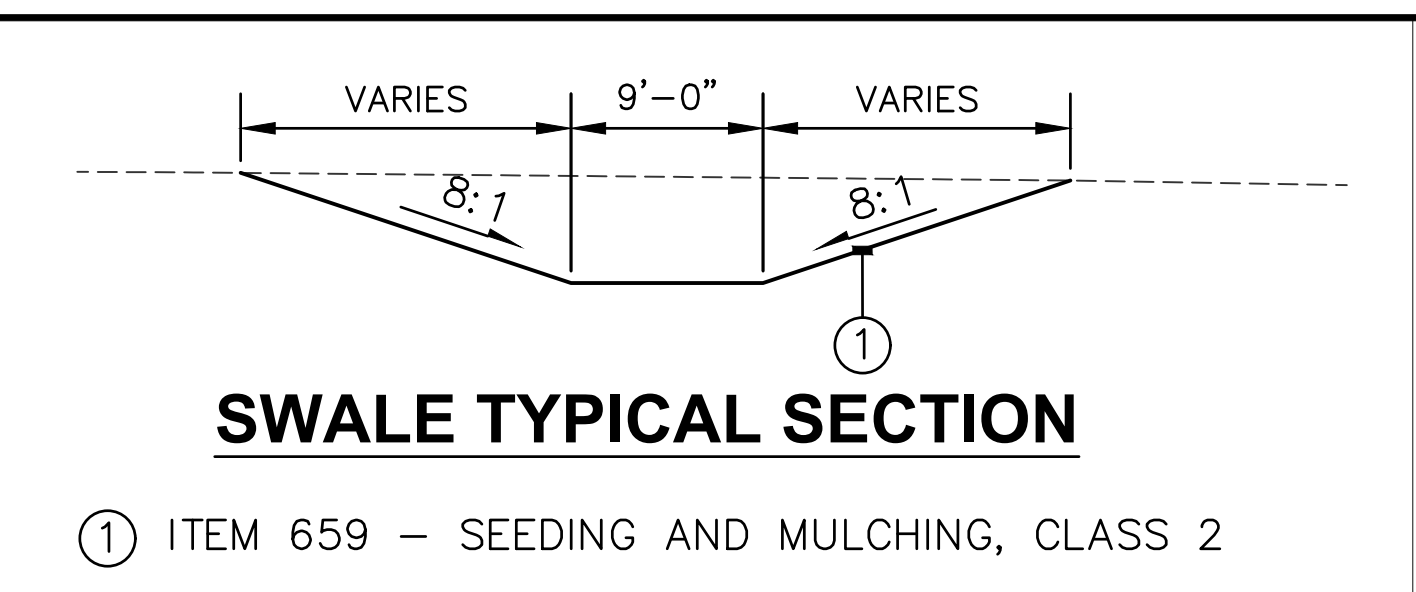
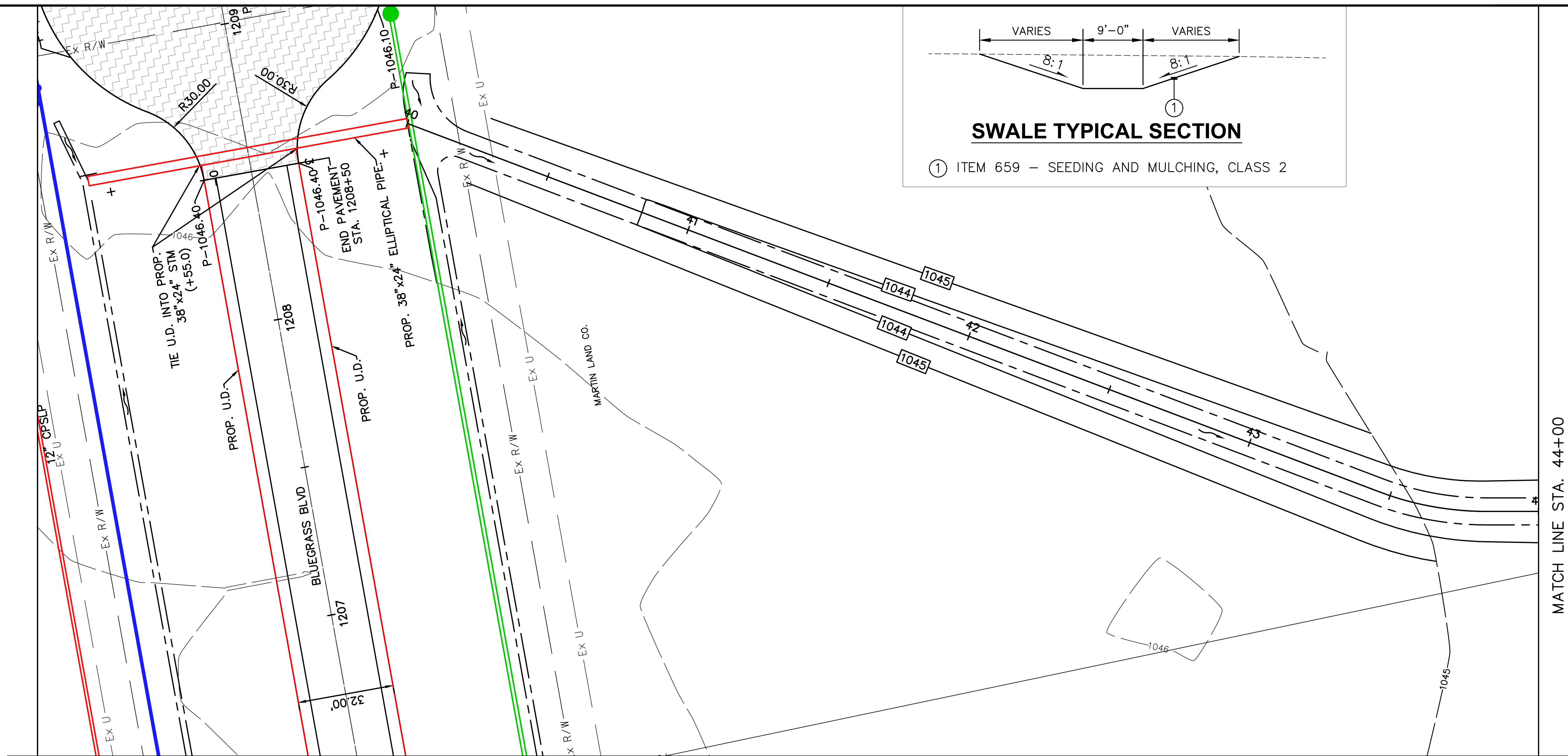
CALCULATED
JLB
CHECKED
NINS


**PLAN AND PROFILE WESTERN SWALE
STA. 46+00 TO STA. 51+00**

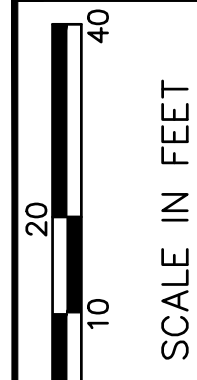
APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

1060	PROPOSED CENTERLINE ELEVATIONS					1044.20		1044.14		1044.08		1044.02		1043.96		1043.90		1043.84		1043.79		1043.73		1043.67		1043.61		1043.55		1043.49		1043.43		1043.38		1043.32		1043.26	1060
1055																																							1055
1050																																							1050
1045																																						1045	
1040																																						1040	
1035																																						1035	
1030	EXISTING CENTERLINE ELEVATIONS					1045.8		1045.7		1045.6		1045.5		1045.4		1045.3		1045.3		1045.4		1045.5		1045.7		1045.8		1045.7		1045.5		1045.3		1045.1		1044.8		1044.5	1030
39+00						40+00		40+00		41+00		41+00		42+00		42+00		43+00		43+00		44+00		44+00		44+00		44+00		44+00		44+00		44+00		44+00	44+00		







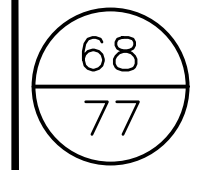
SCALE IN FEET

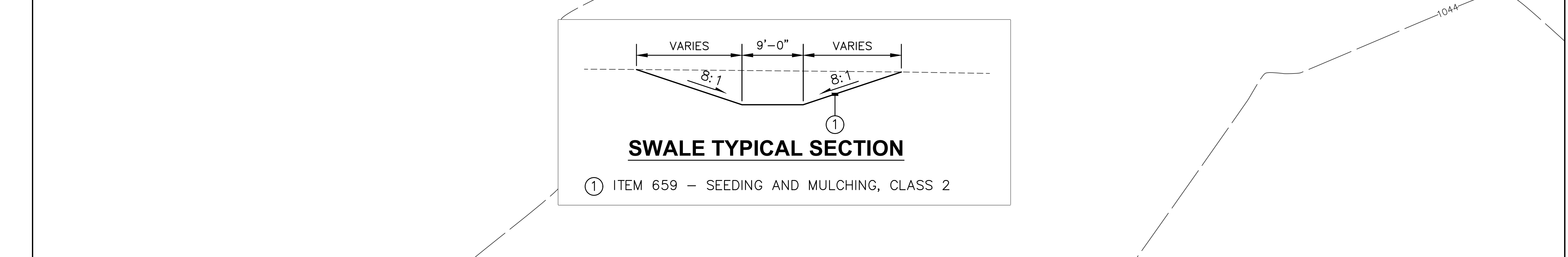
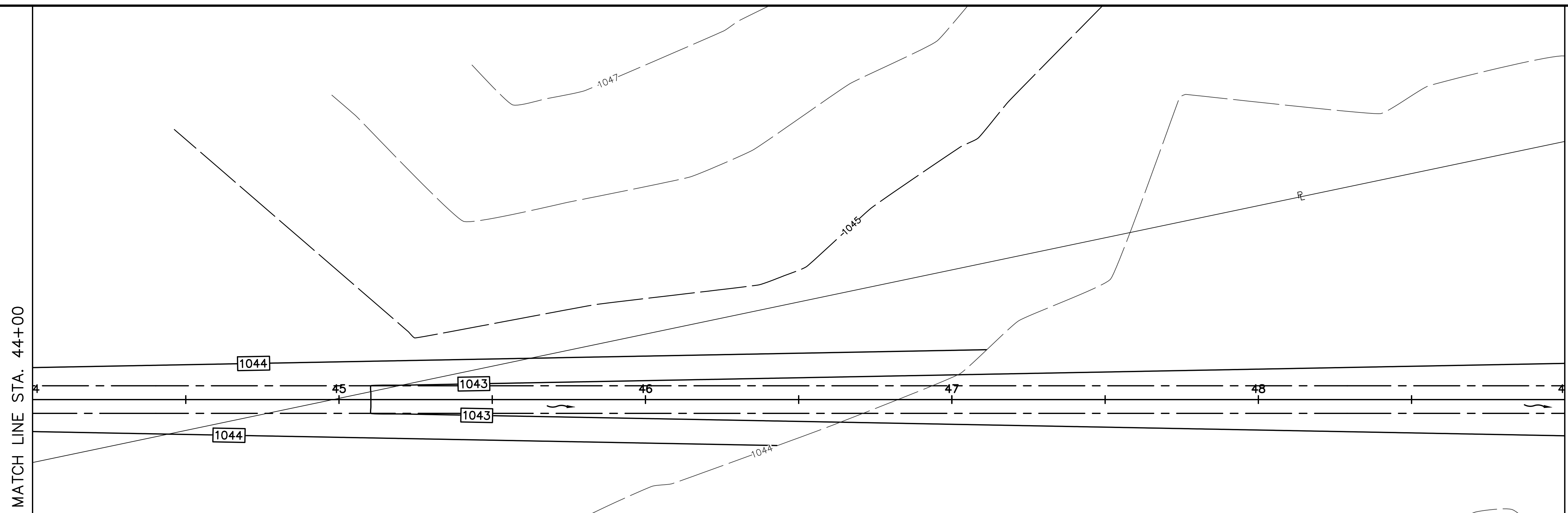
APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS BLVD. PHASE 1

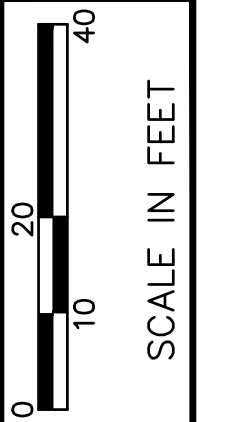
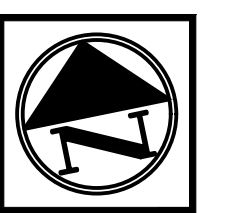
PLAN AND PROFILE NORTHEAST SWALE
STA. 39+00 TO STA. 44+00

CALCULATED: JLB
CHECKED: NINS





STATION	EXISTING CENTERLINE ELEVATIONS	PROPOSED CENTERLINE ELEVATIONS
44+00	1044.3	1043.20
	1044.2	1043.14
	1044.4	1043.08
45+00	1044.6	1043.02
	1044.7	1042.97
	1044.7	1042.91
	1044.6	1042.85
46+00	1044.5	1042.79
	1044.4	1042.73
	1044.2	1042.67
	1044.0	1042.61
47+00	1043.9	1042.56
	1043.6	1042.50
	1043.5	1042.44
	1043.4	1042.38
48+00	1043.4	1042.32
	1043.4	1042.26
	1043.5	1042.20
	1043.5	1042.15
49+00	1043.5	1042.09

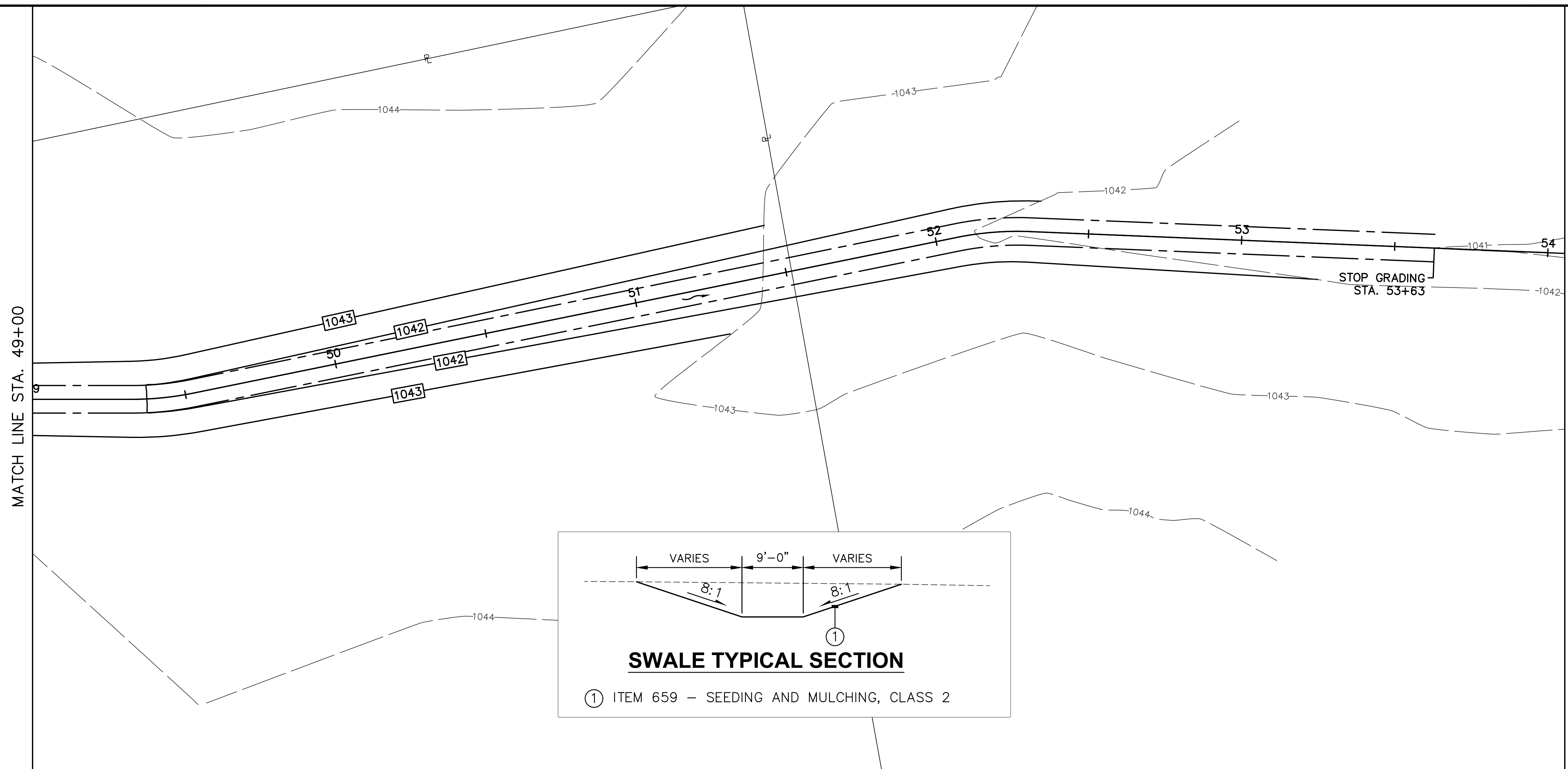


CALCULATED
JLB
CHECKED
NINS

**PLAN AND PROFILE NORTHEAST SWALE
STA. 44+00 TO STA. 49+00**

APPROVED FOR CONSTRUCTION
7-02-2020

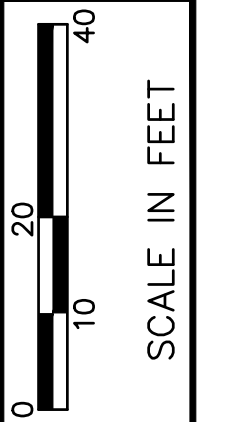
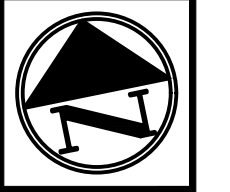
BLUEGRASS BLVD. PHASE 1



Station	Existing Centerline Elevation	Proposed Centerline Elevation
49+00	1043.3	1042.03
		1041.97
		1041.91
		1041.85
50+00	1043.1	1041.79
		1041.74
		1041.68
		1041.62
51+00	1043.1	1041.56
		1041.50
		1041.44
		1041.38
52+00	1042.2	1041.33
		1041.27
		1041.21
		1041.15
53+00	1041.3	1041.09
		1041.03
		1041.0
54+00	1040.9	

Grade: -0.23%

STOP GRADING, SWALE ELEVATION 1041.00



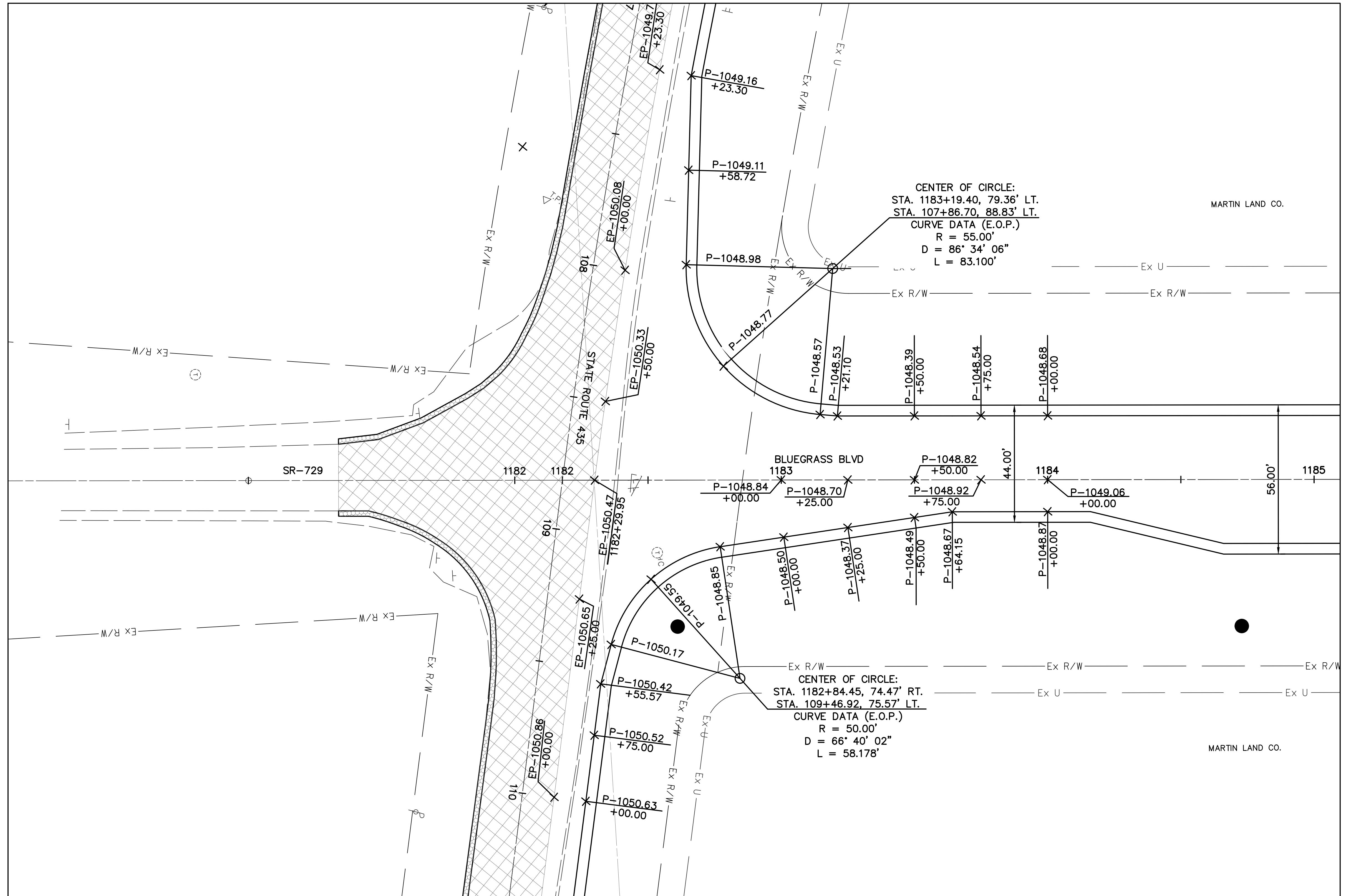
CALCULATED
JLB
CHECKED
NINS

**PLAN AND PROFILE NORTHEAST SWALE
 STA. 49+00 TO STA. 54+00**

APPROVED FOR CONSTRUCTION
 7-02-2020

BLUEGRASS BLVD. PHASE 1

70
77



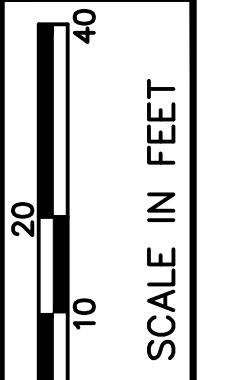
CENTER OF CIRCLE:
 STA. 1183+19.40, 79.36' LT.
 STA. 107+86.70, 88.83' LT.
 CURVE DATA (E.O.P.)
 R = 55.00'
 D = 86° 34' 06"
 L = 83.100'

CENTER OF CIRCLE:
 STA. 1182+84.45, 74.47' RT.
 STA. 109+46.92, 75.57' LT.
 CURVE DATA (E.O.P.)
 R = 50.00'
 D = 66° 40' 02"
 L = 58.178'

STATE ROUTE 435 AND BLUEGRASS BOULEVARD INTERSECTION

LEGEND

P - PROPOSED PAVEMENT ELEVATION
 EP - EXISTING PAVEMENT ELEVATION



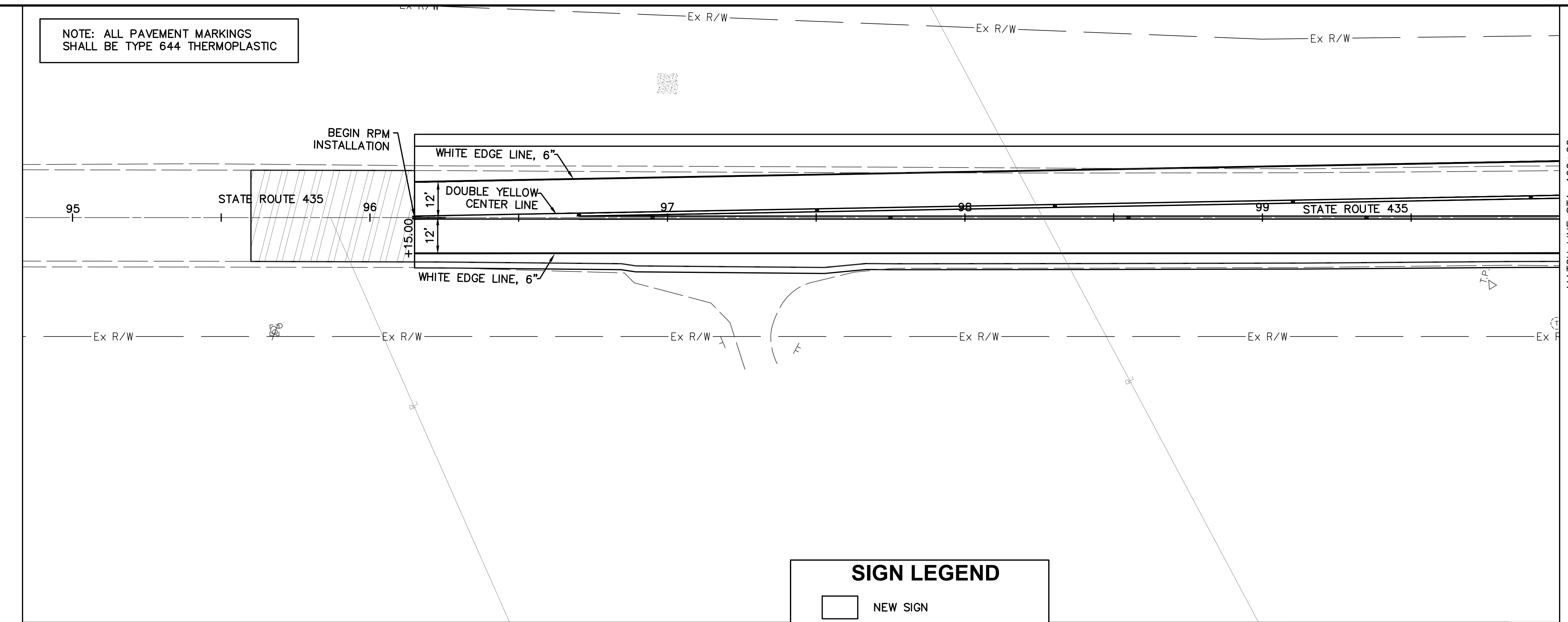
CALCULATED	JLB
CHECKED	NINS

**INTERSECTION DETAILS
 S.R. 435 AND BLUEGRASS BLVD.**

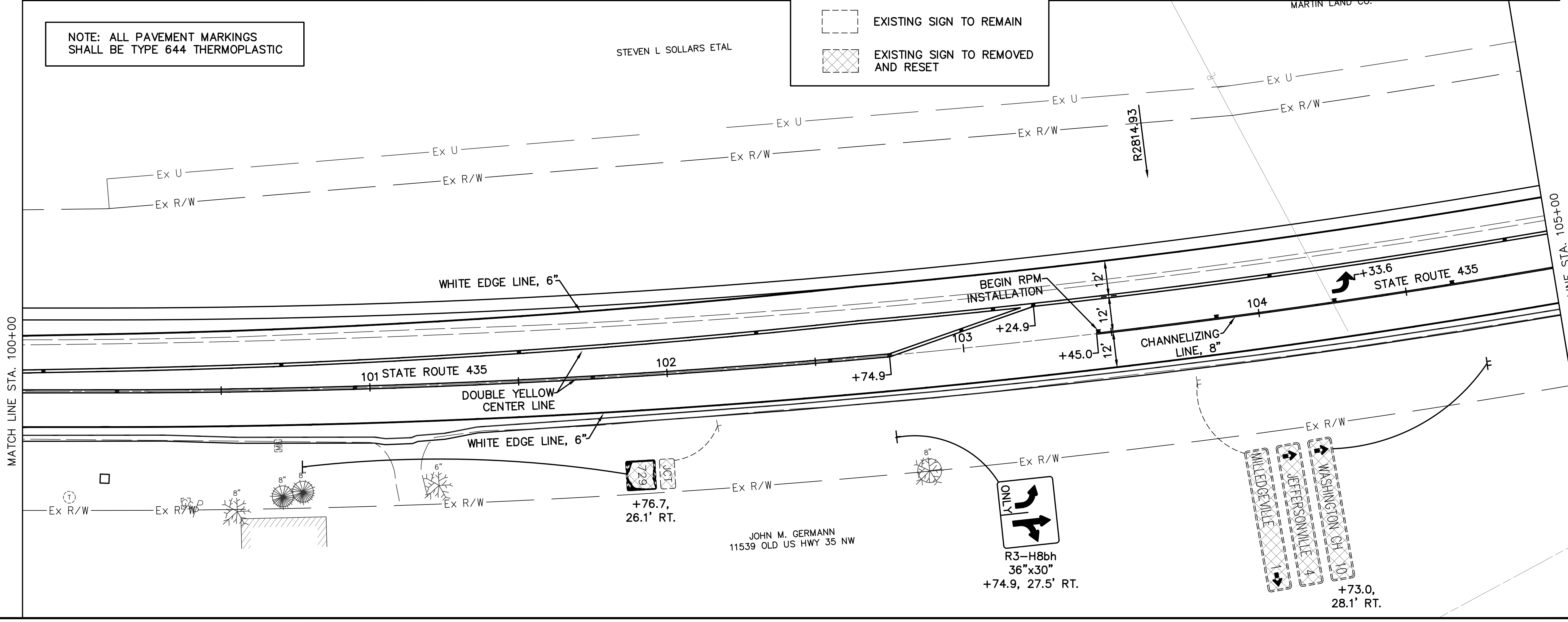
APPROVED FOR CONSTRUCTION
 7-02-2020

BLUEGRASS BLVD, PHASE 1

NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC

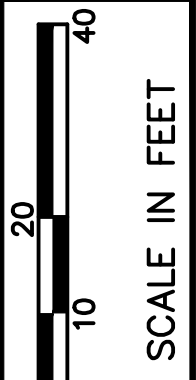
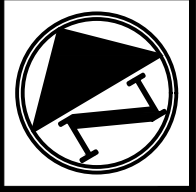


NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC



SIGN LEGEND

- NEW SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO REMOVED AND RESET



CALCULATED
JLB
CHECKED
NINS

**PAVEMENT MARKING AND SIGNAGE PLAN
BLUEGRASS BLVD. STA. 95+00 TO STA. 105+00**

APPROVED FOR CONSTRUCTION
7-02-2020

**BLUEGRASS
BLVD. PHASE 1**

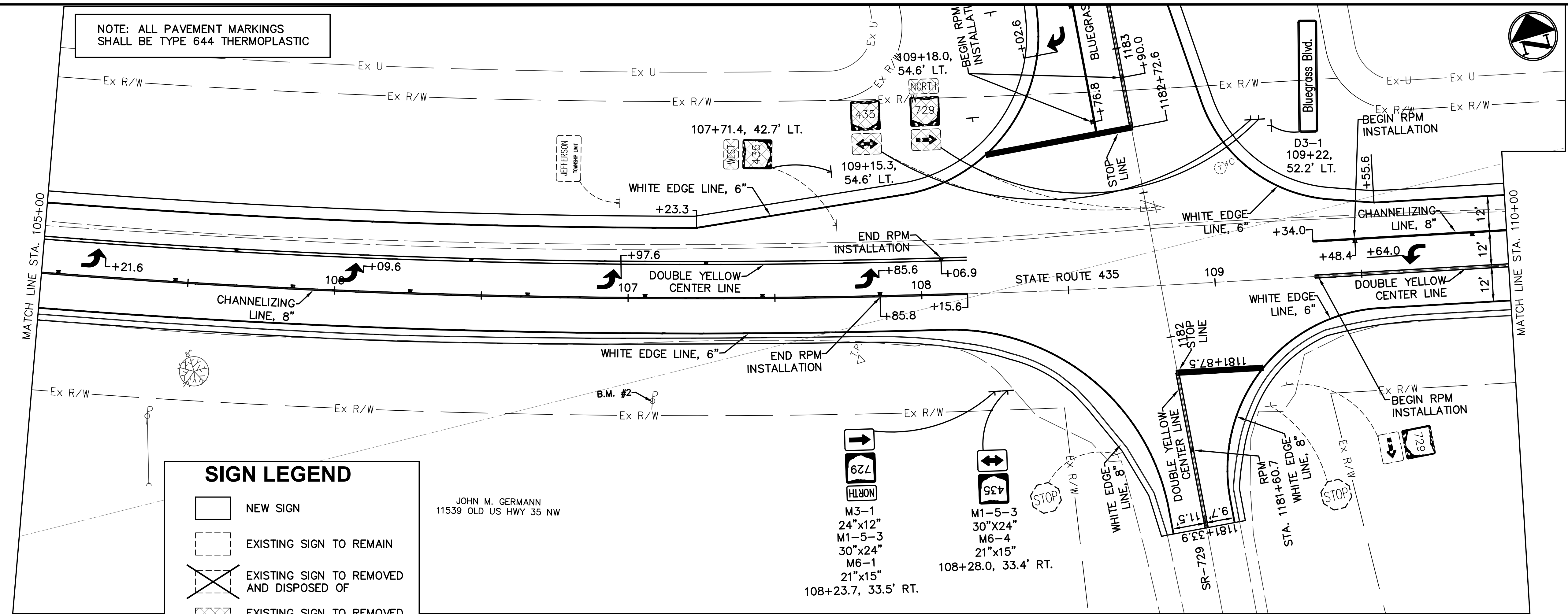
72
77

MATCH LINE STA. 100+00

MATCH LINE STA. 100+00

MATCH LINE STA. 105+00

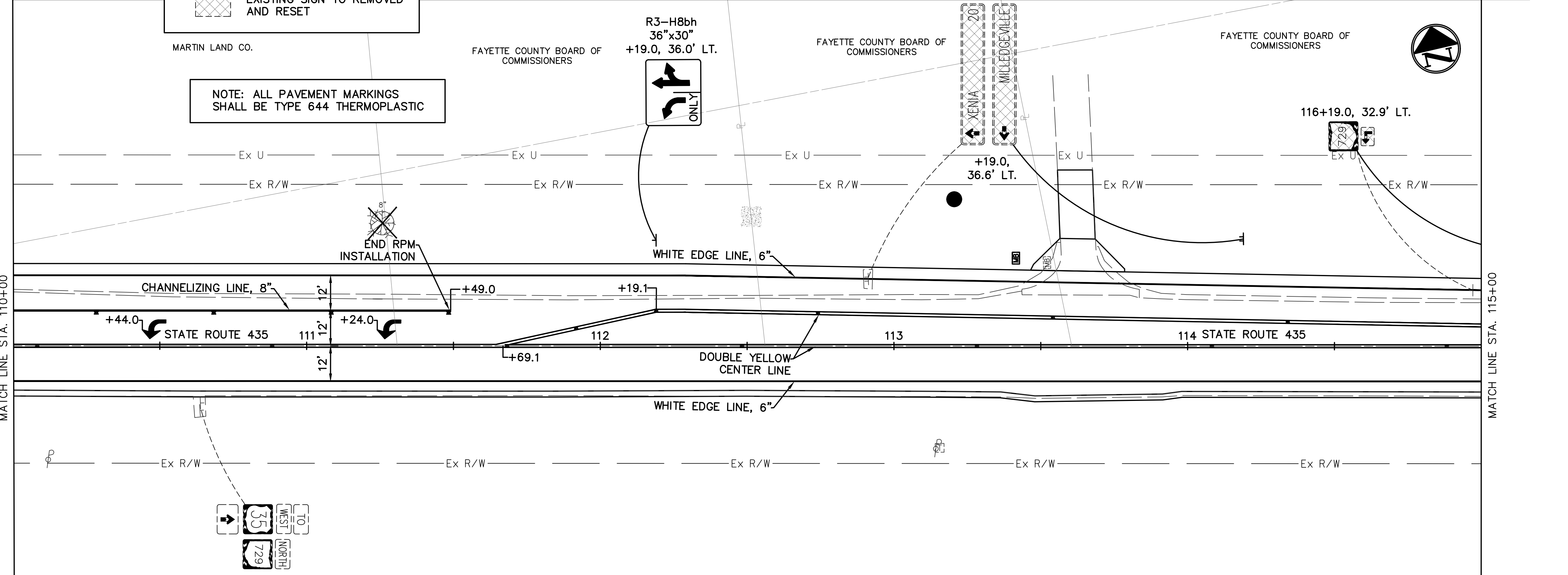
NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC



SIGN LEGEND

- NEW SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO REMOVED AND DISPOSED OF
- EXISTING SIGN TO REMOVED AND RESET

NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC



RUTH ANN PERRILL, SHERIDAN ETAL
8875 STATE ROUTE 729 NW

0 10 20 40
SCALE IN FEET

CALCULATED JLB
CHECKED NNS

**PAVEMENT MARKING AND SIGNAGE PLAN - S.R. 435
STA. 105+00 TO STA. 115+00**

APPROVED FOR CONSTRUCTION
7-02-2020

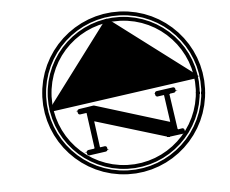
**BLUEGRASS
BLVD. PHASE 1**

NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC

RELOCATED SIGN FROM SHEET 73
116+19.0, 32.9' LT.

FAYETTE COUNTY BOARD OF COMMISSIONERS

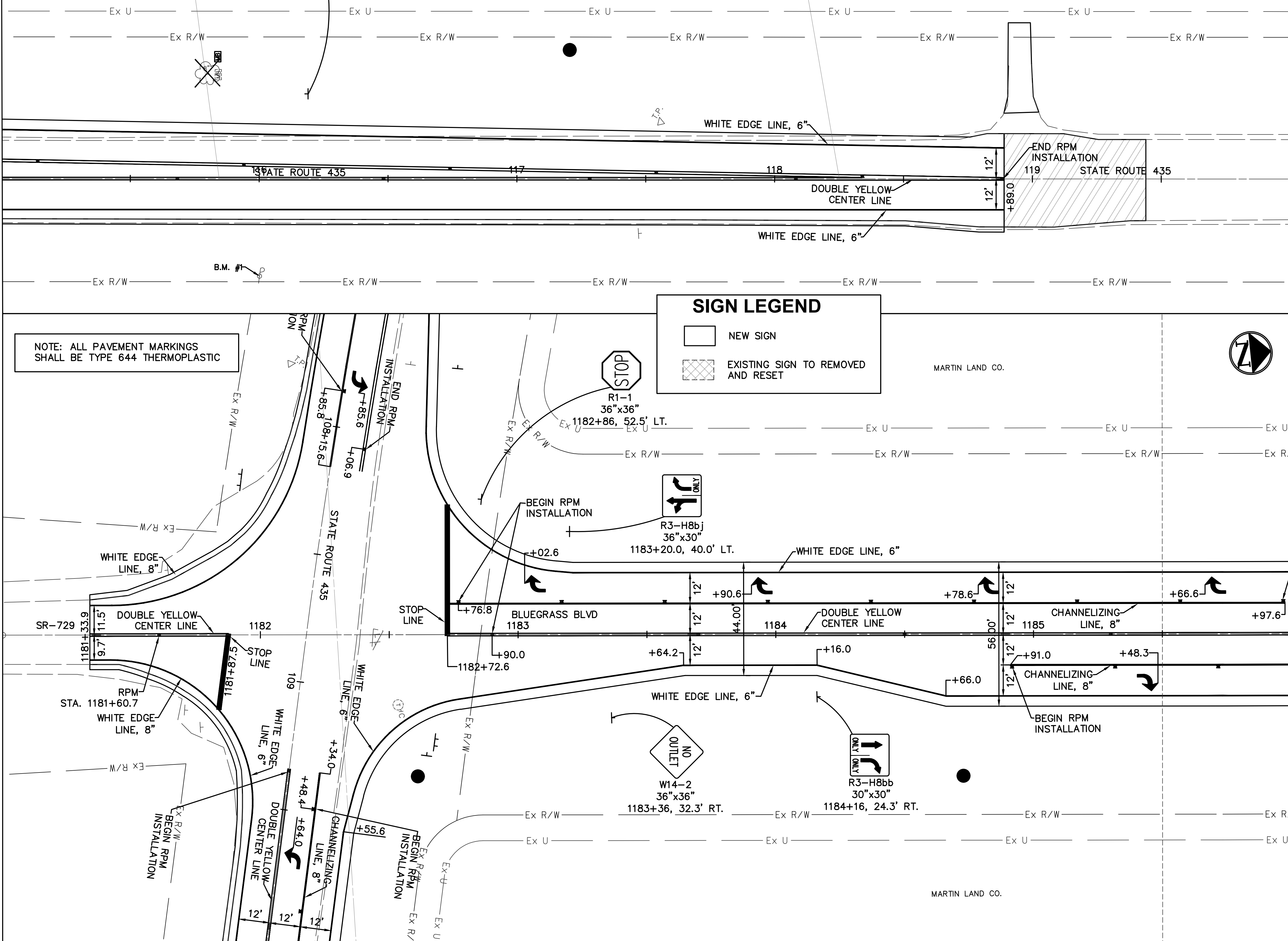
MARTIN LAND CO.
11184 OLD US HWY 35 NW



MATCH LINE STA. 115+00

MATCH LINE STA. 1181+00

MATCH LINE STA. 1186+00



NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC

SIGN LEGEND

- NEW SIGN
- EXISTING SIGN TO REMOVED AND RESET

0 10 20 40
SCALE IN FEET

CALCULATED JLB
CHECKED NINS

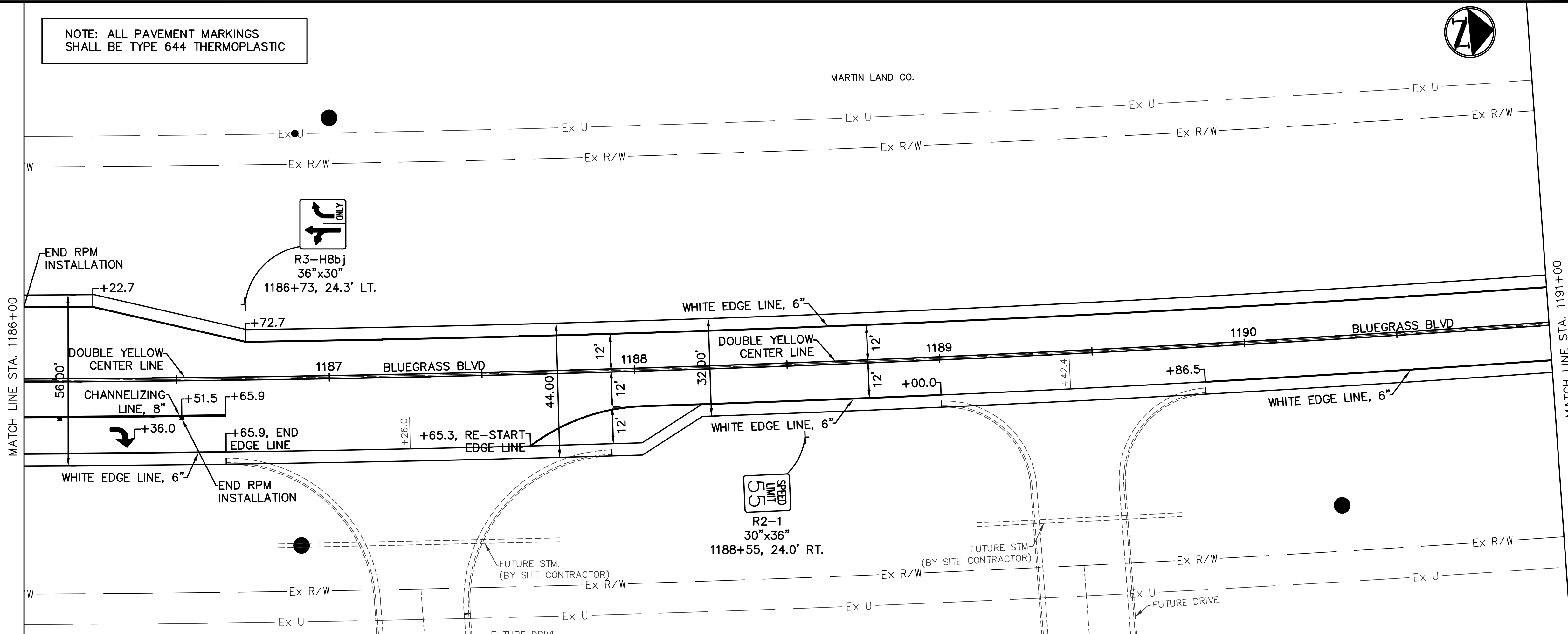
PAVEMENT MARKING AND SIGNAGE PLAN
S.R. 435 - STA. 115-120, BLUEGRASS STA. 1181-1186

APPROVED FOR CONSTRUCTION
7-02-2020

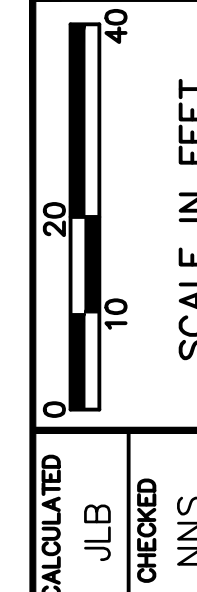
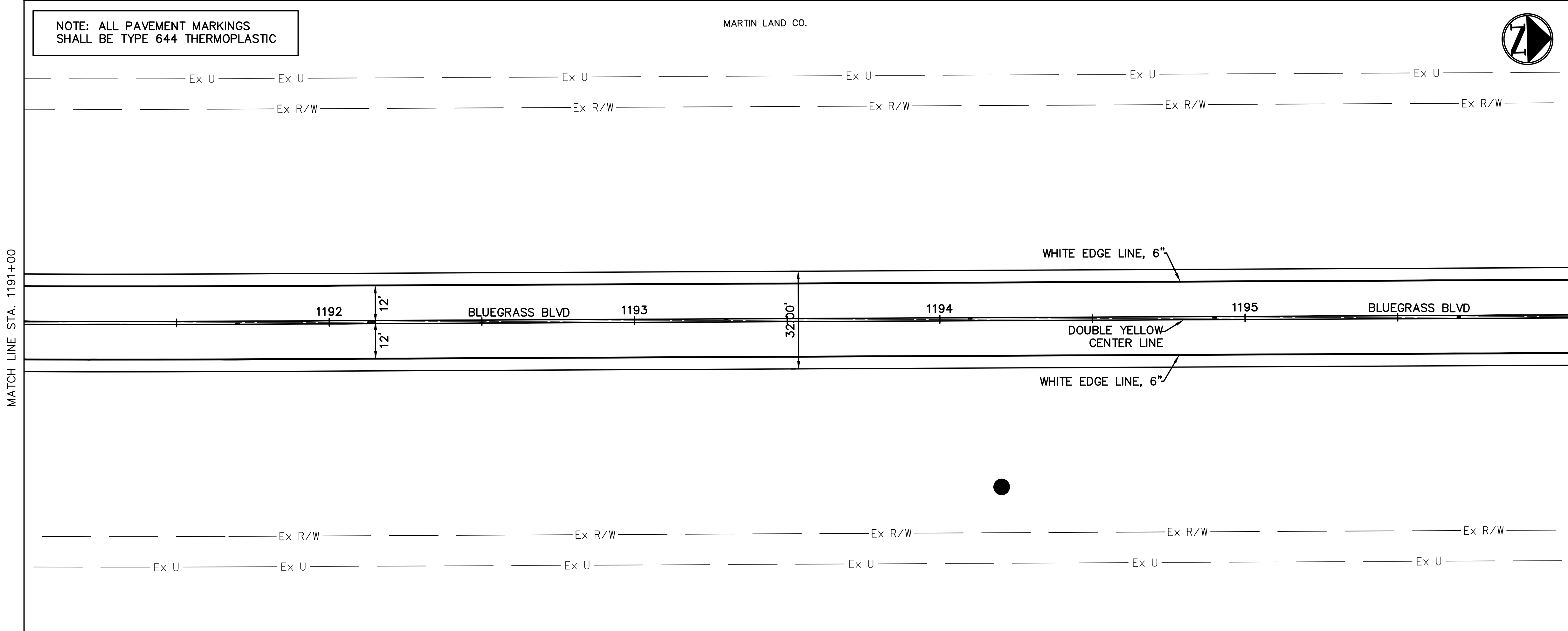
BLUEGRASS BLVD. PHASE 1

74
77

NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC



NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC



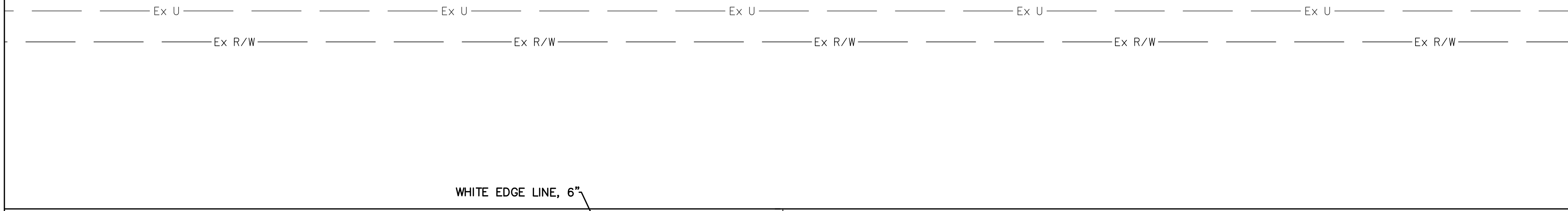
PAVEMENT MARKING AND SIGNAGE PLAN
BLUEGRASS BLVD. STA. 1186+00 TO STA. 1196+00

APPROVED FOR CONSTRUCTION
 7-02-2020

BLUEGRASS
BLVD. PHASE 1

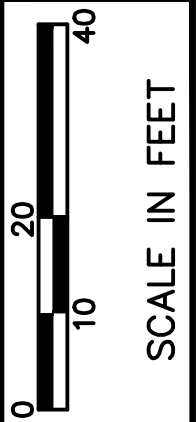
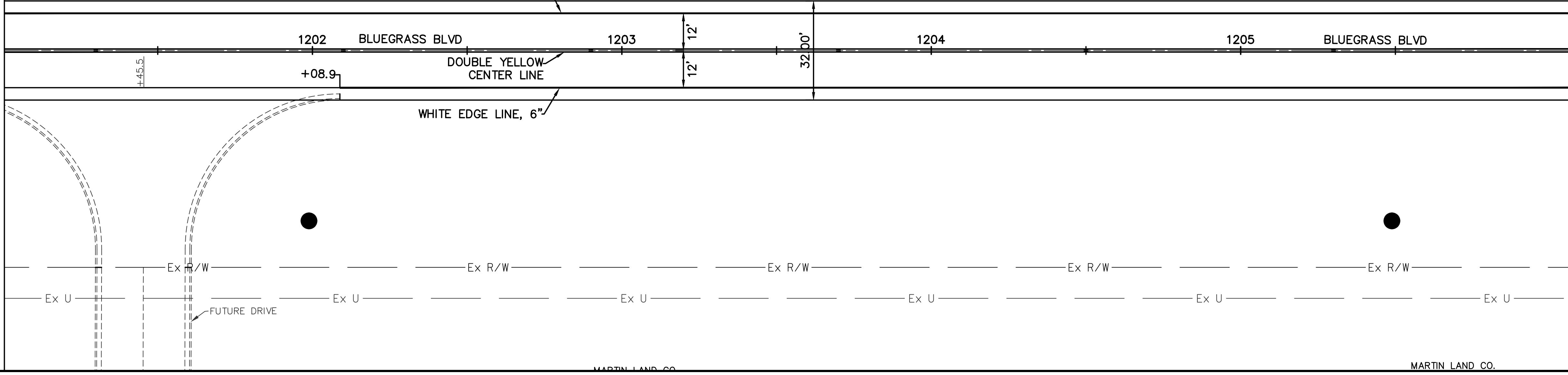
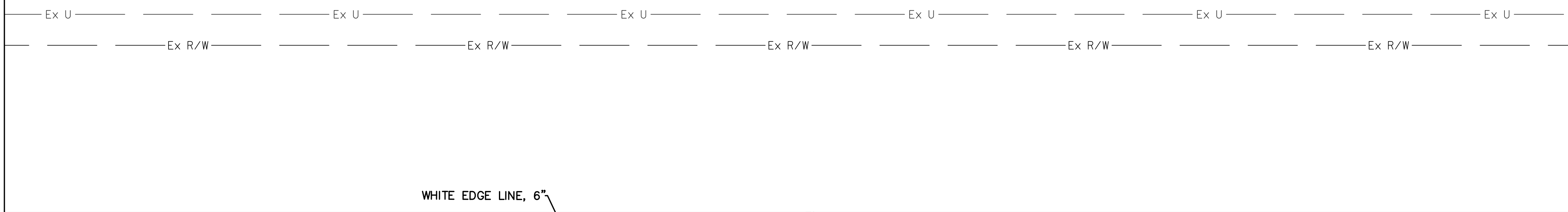
NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC

MATCH LINE STA. 1196+00



NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC

MATCH LINE STA. 1201+00



CALCULATED	JLB	CHECKED	NINS
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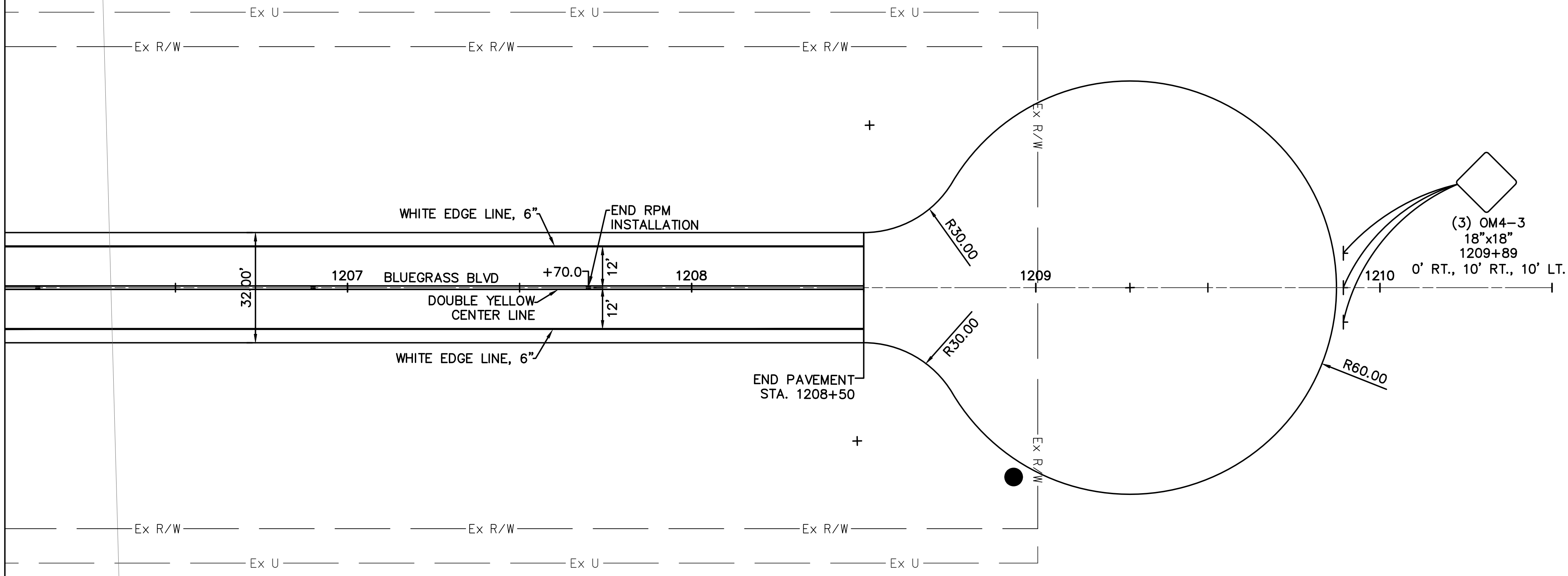
PAVEMENT MARKING AND SIGNAGE PLAN
BLUEGRASS BLVD. STA. 1196+00 TO STA. 1206+00

APPROVED FOR CONSTRUCTION
 7-02-2020

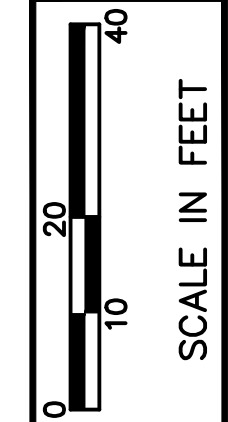
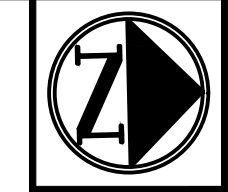
BLUEGRASS
BLVD. PHASE 1

NOTE: ALL PAVEMENT MARKINGS SHALL BE TYPE 644 THERMOPLASTIC

MATCH LINE STA. 1206+00



MARTIN LAND CO.



CALCULATED JLB
CHECKED NINS

PAVEMENT MARKING AND SIGNAGE PLAN
BLUEGRASS BLVD. STA. 1206+00 TO STA. 1210+00

APPROVED FOR CONSTRUCTION
7-02-2020

BLUEGRASS
BLVD. PHASE 1