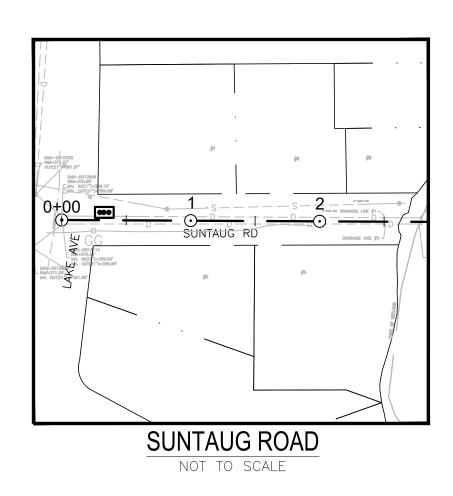
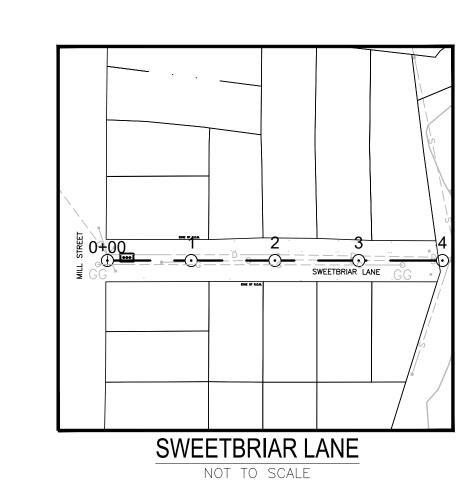
CITY OF WORCESTER, MA DEPT. OF PUBLIC WORKS & PARKS ENGINEERING DIVISION

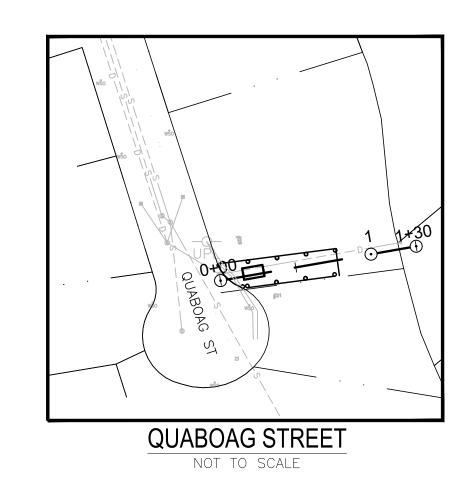


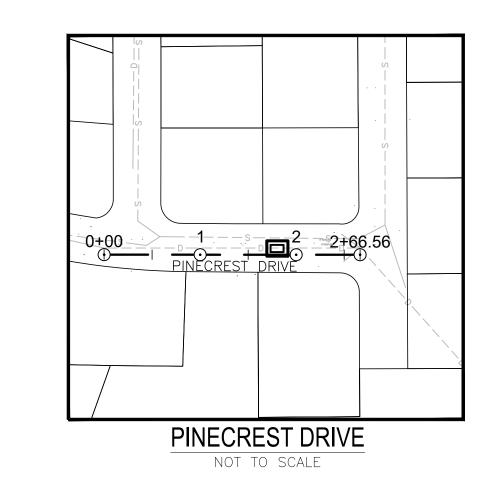
S24-1 STORM WATER INFRASTRUCTURE IMPROVEMENTS - ARPA

SUNTAUG ROAD, SWEETBRIAR LANE, QUABOAG STREET









DRAWING INDEX

| COVER SHEET | 1 |
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| PINECREST DRIVE | 5 |
| CITY OF WORCESTER STANDARD DETAILS | 6 |

| 1 10/29/2024 ADDENDUM - 75% PLANS NO. DATE DESCRIPTION |
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| ADDENDUM - 75% PLANS DESCRIPTION |
| |

PUBLIC WORKS AND PARK
Engineering Division
20 East Worcester St, Worcester MA 0160

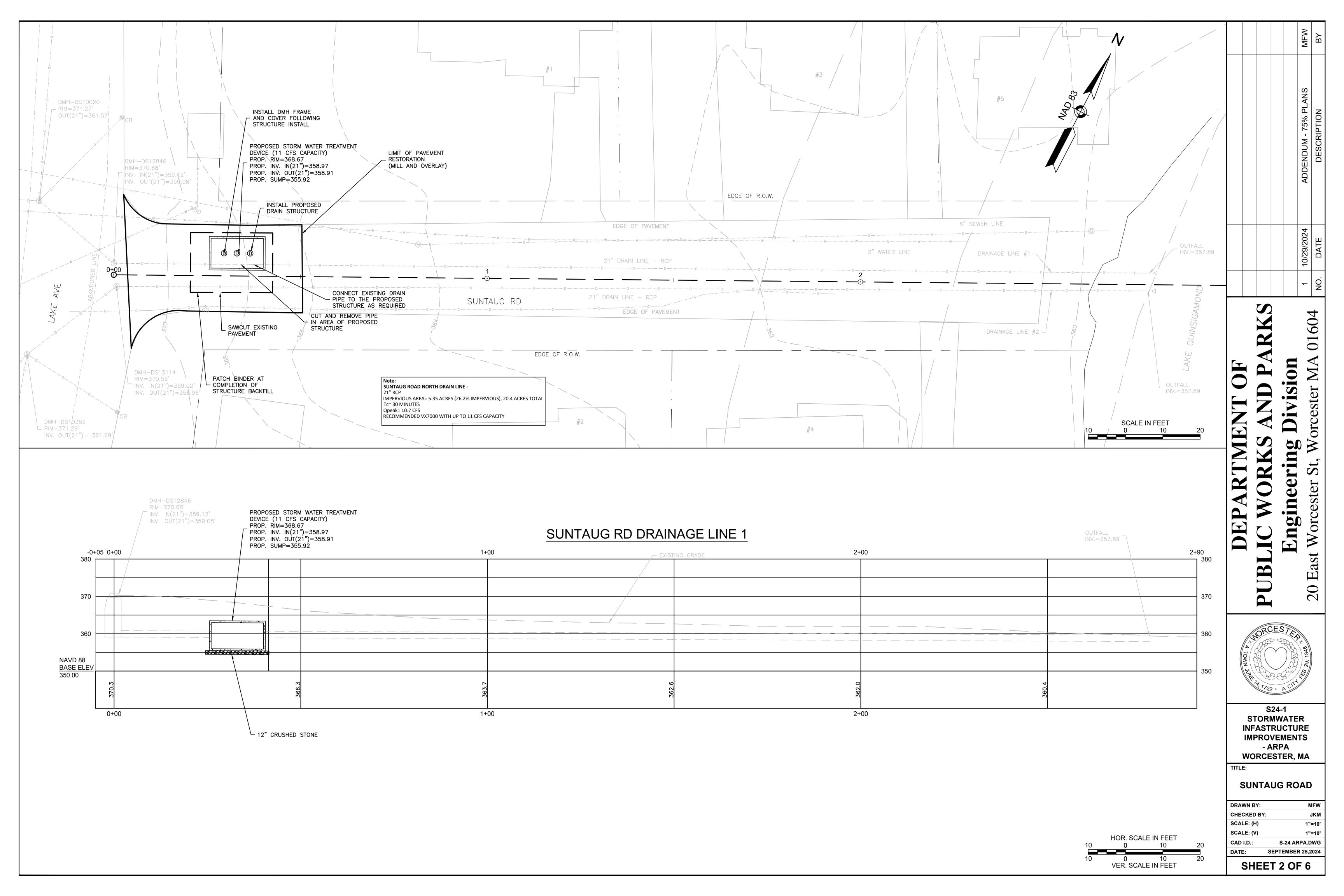


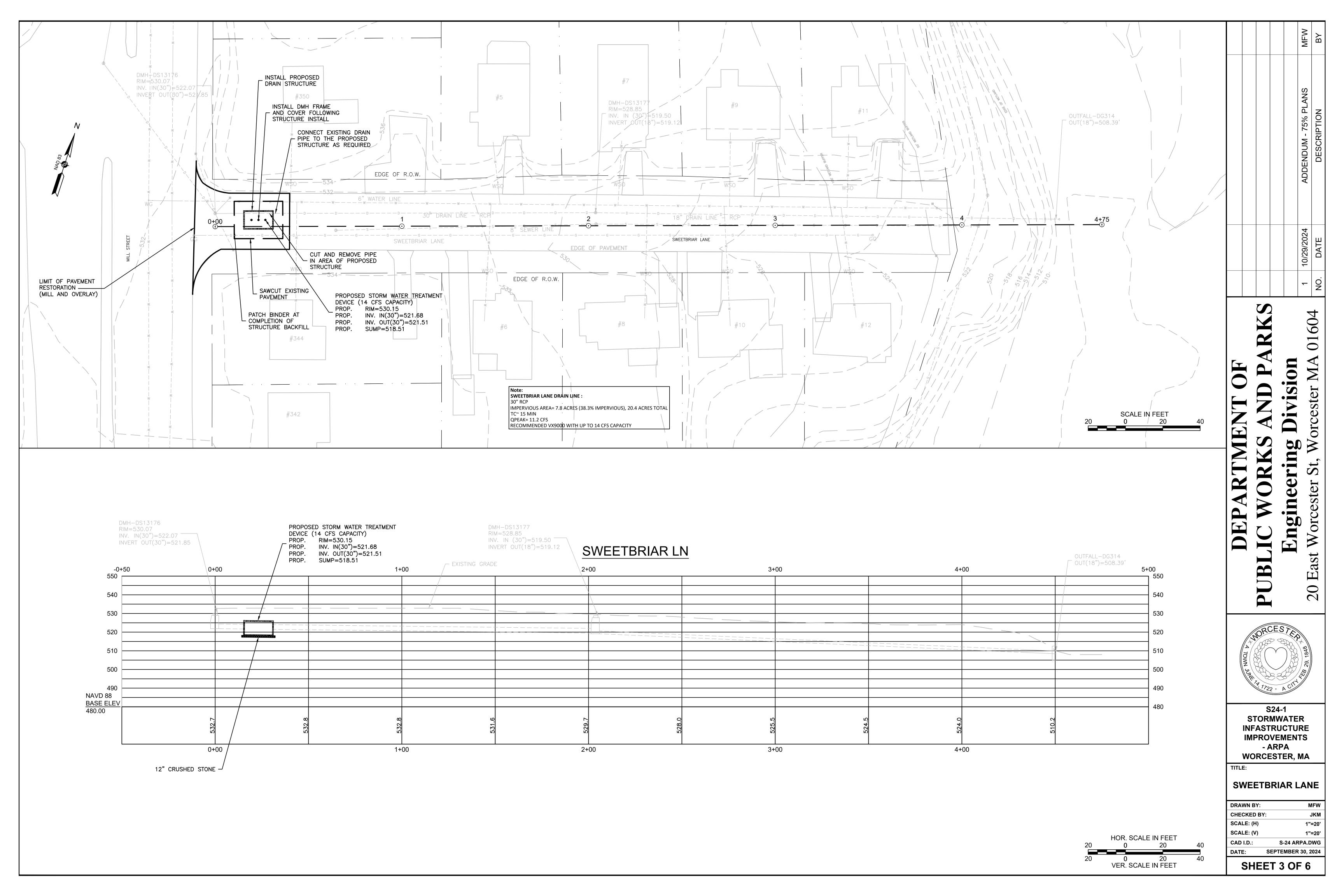
S24-1
STORMWATER
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- ARPA
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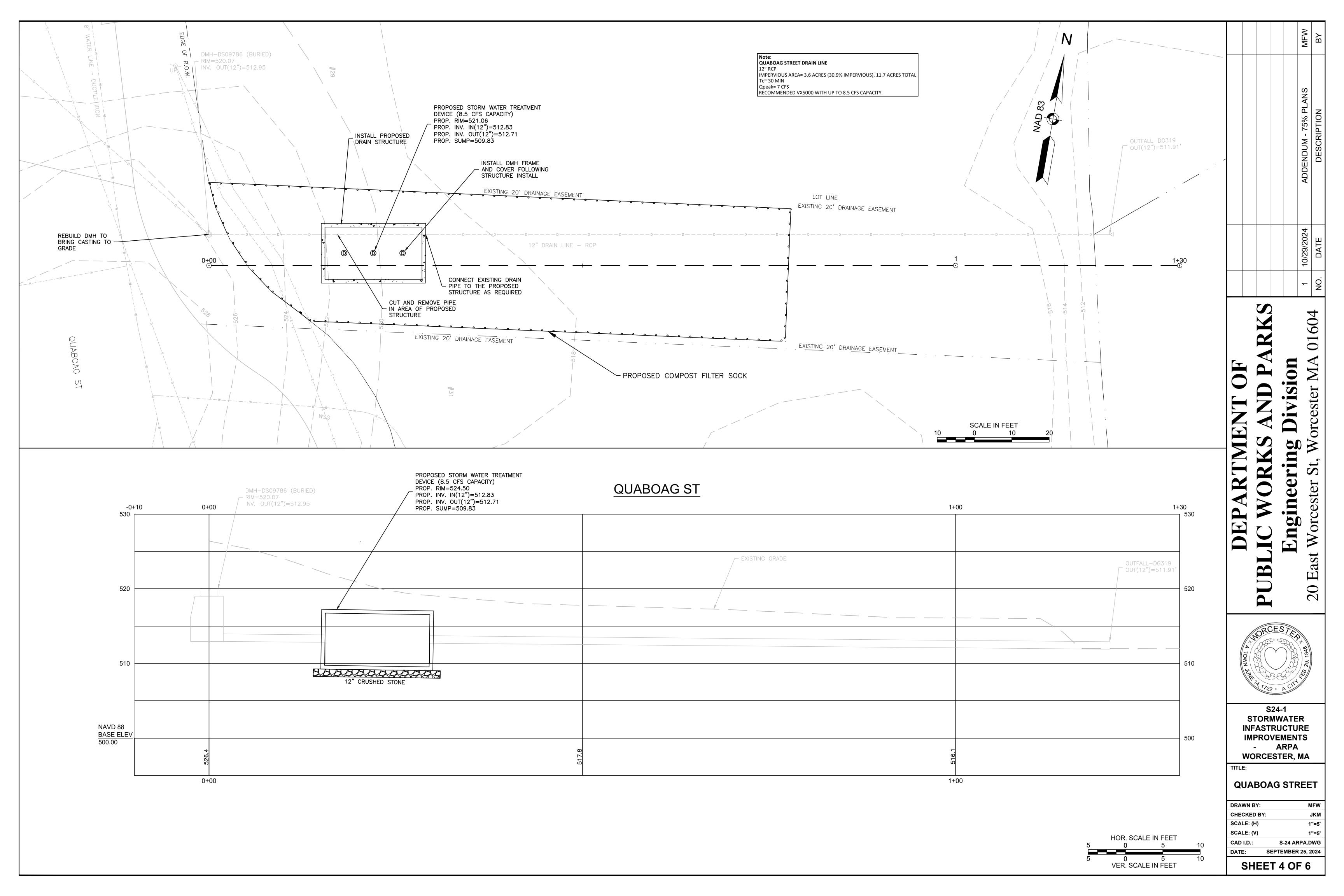
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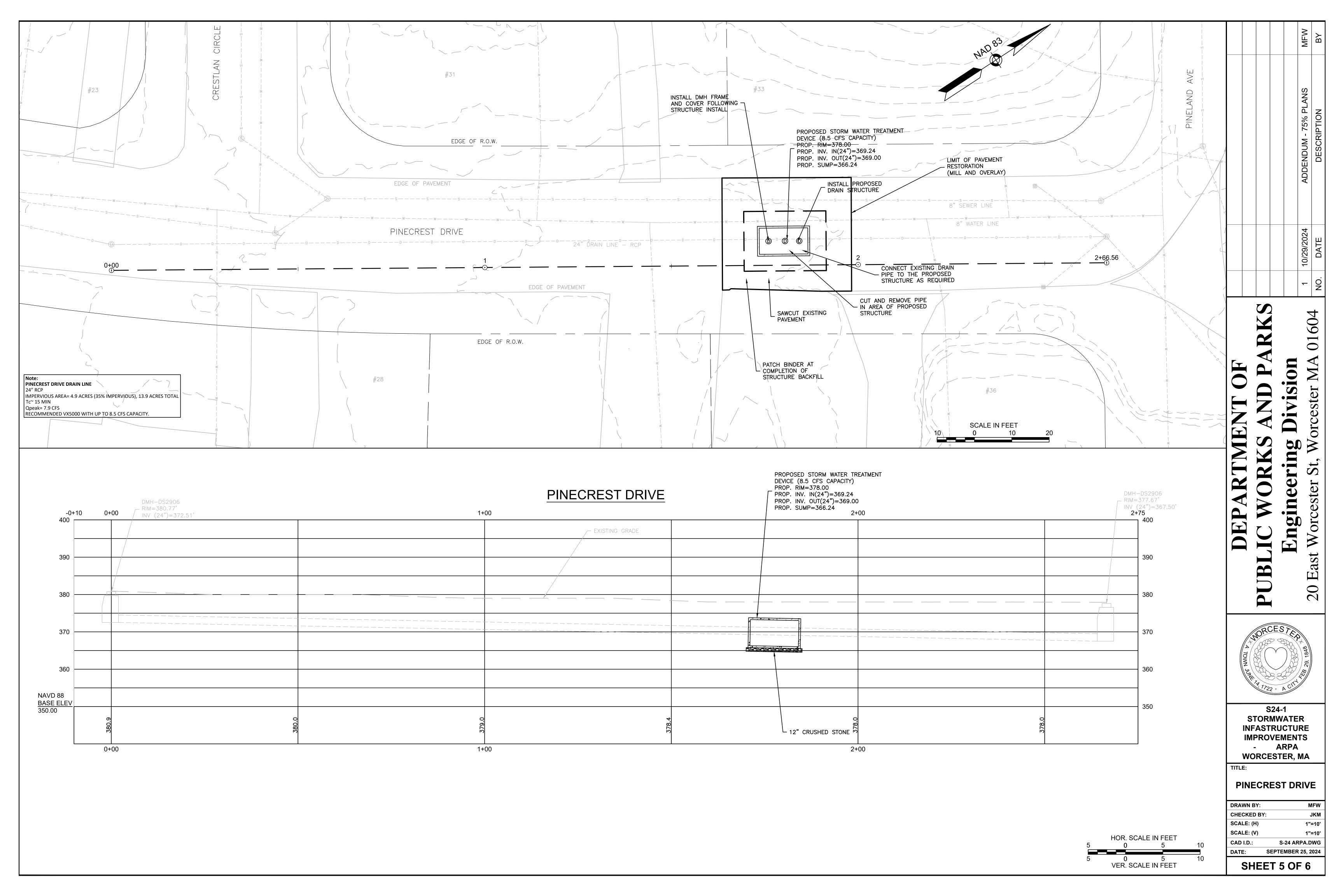
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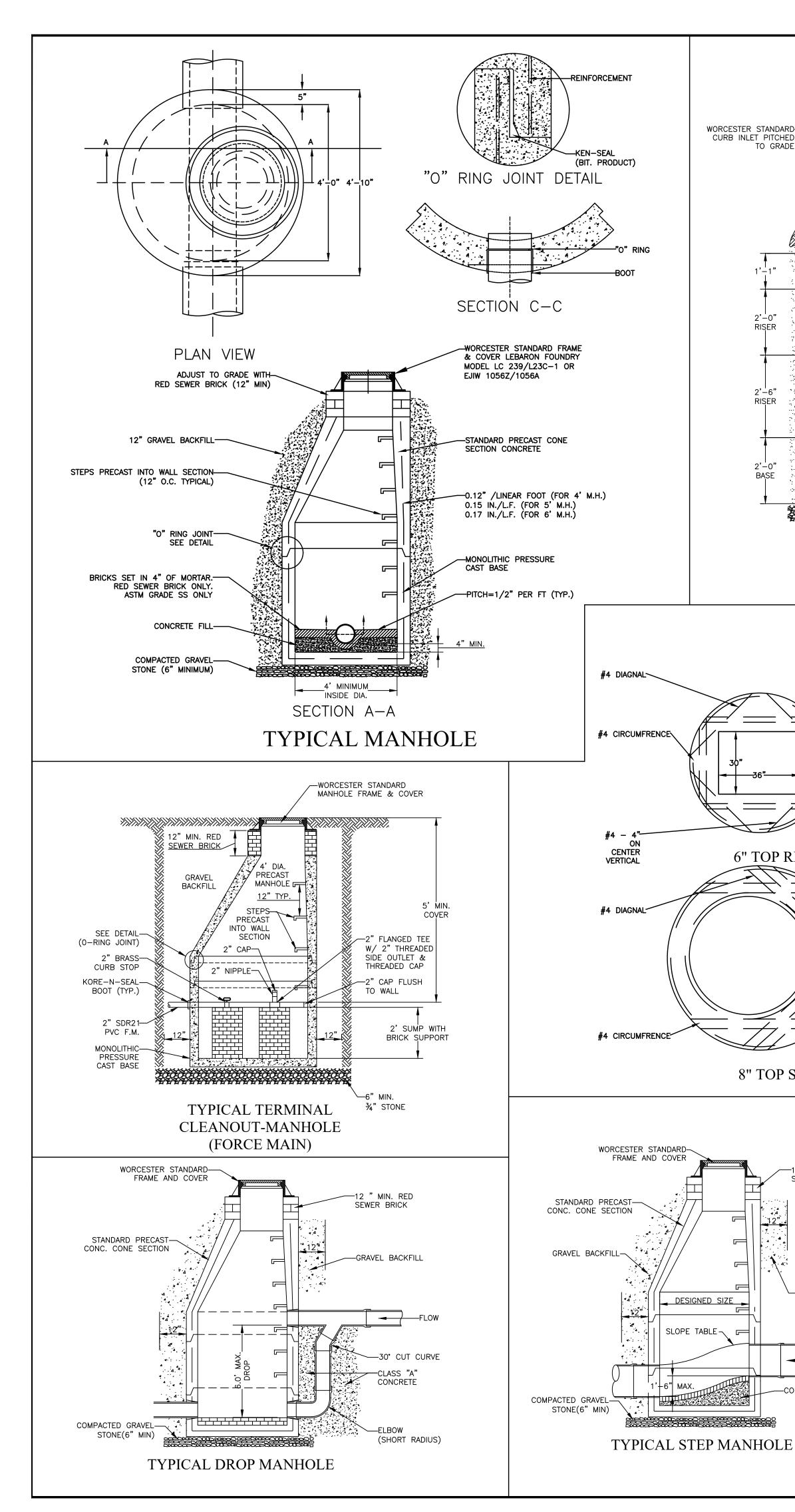
| SHEE | ET 1 OF 6 |
|------------|---------------------------|
| DATE: | SEPTEMBER 25, 2024 |
| CAD I.D.: | S-24 ARPA.DWG |
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| SCALE: (H) | AS SHOWN |
| CHECKED BY | JKM |
| DRAWN BY: | MFW |
| | |

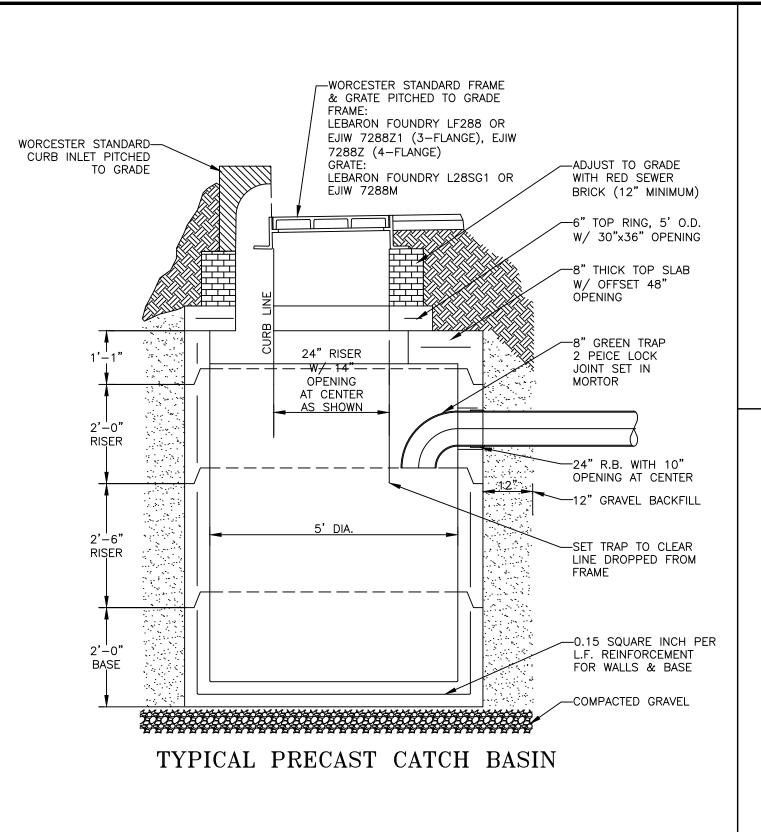












—20 **₹"**—

SECTION A-A

MANHOLE FRAME &

COVER ASSEMBLY

IN BIT. CONC.

COURSE

-2½" BINDER

─6" PROCESSED

-45 DEGREE BEND

6" TOP RING

8" TOP SLAB

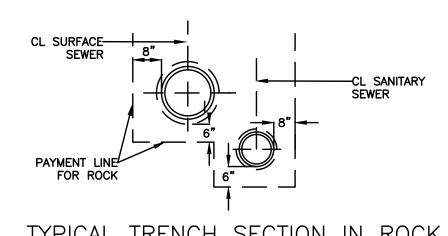
' MIN. RED

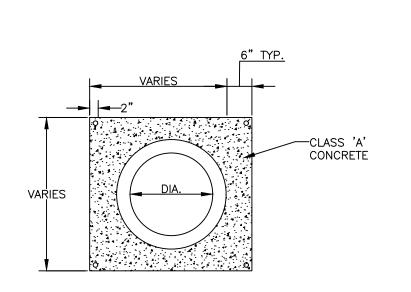
└─GRAVEL BACKFILL

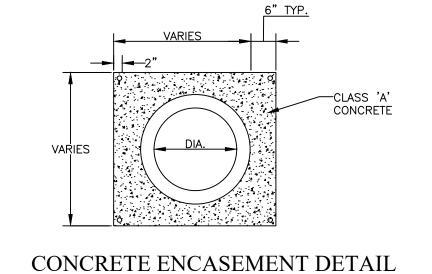
SEWER BRICK

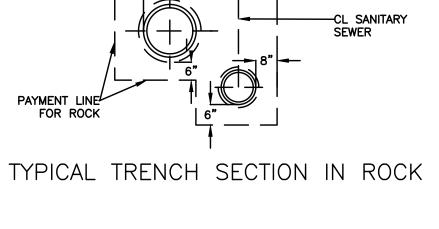
ON PROPERTY

TYPICAL CLEANOUT

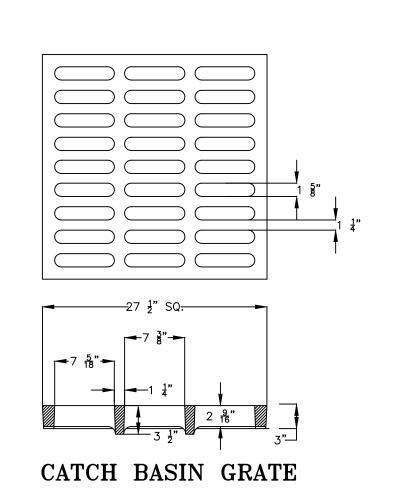












CATCH BASIN FRAME

THE CITY OF WORCESTER IS NOT RESPONSIBLE FOR JOB SAFETY OR SUPERVISION. THE CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.

- THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTIONS POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 3. ALL UTILITIES AND SERVICES INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, FIBER OPTICS, ETC WITHIN THE LIMITS OF DISTURBANCE SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO COST TO THE CITY.
- 4. DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING CONSTRUCTION ACTIVITY.
- ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS AS WELL AS FEDERAL, STATE AND CITY REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS SHALL BE IDENTIFIED BY THE CONTRACTOR TO THE CITY OF WORCESTER IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF SITE ACTIVITY.
- 6. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND CITY REGULATIONS.
- 7. THE CONTRACTOR SHALL COMPLY WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
- 8. EXPLOSIVES SHALL NOT BE USED WITHOUT WRITTEN CONSENT OF ALL APPLICABLE GOVERNING AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AND EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
- 9. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE SURVEYOR'S BENCHMARK AND MUST BE VERIFIED BY THE
- 10. THE CONTRACTOR SHALL BE FAMILIAR AND RESPONSIBLE FOR ANY/ALL CERTIFICATIONS, INSPECTIONS, ETC. REQUIRED BY ALL GOVERNING JURISDICTIONAL AGENCIES DURING AND AFTER CONSTRUCTION FOR SIGN-OFF, INCLUDING BUT NOT LIMITED TO PROCUREMENT OF SERVICES, SCHEDULING OF FIELD OBSERVATIONS AND COORDINATION WITH REPRESENTATIVES OF THE APPROPRIATE PARTIES.
- 11. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
- 12. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND PARKS ENGINEERING DIVISION AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND PARKS ENGINEERING DIVISION IN WRITING IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- 13. DEBRIS SHALL NOT BE BURIED ON-SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL CITY, COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE
- 14. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PROVISIONS TO ASSURE STABILITY OF STRUCTURES, AS FIELD CONDITIONS DICTATE.
- 15. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND PARKS, ENGINEERING DIVISION, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE CITY OF WORCESTER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.

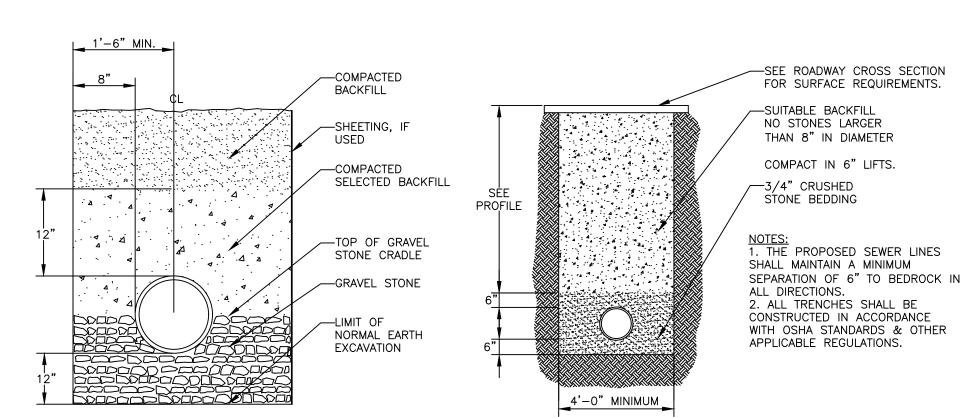
LIMITS OF NORMAL EXCAVATION

THE LIMITS OF NORMAL WIDTH AND DEPTH OF EXCAVATION SHALL BE AS DESCRIBED BELOW UNLESS OTHER LIMITS ARE INDICATED ON THE DRAWINGS AS SPECIFIED.

FOR PIPES IN TRENCH, THE NORMAL WIDTH OF THE TRENCH SHALL BE MEASURED BETWEEN VERTICAL PLANES WHICH ARE A DISTANCE APART EQUAL TO THE SUM OF 18" PLUS 1 1 TIMES THE NOMINAL INSIDE DIAMETER OF THE PIPE. IF THE WIDTH SO COMPUTED IS LESS THAN 3 FEET, A WIDTH OF 3 FEET SHALL BE TAKEN AS THE NORMAL WIDTH OF PAYMENT. THE NORMAL DEPTH SHALL BE MEASURED TO A DISTANCE OF 0.5 FEET BELOW THE BOTTOM OF THE OUTSIDE OF THE PIPE IN EARTH AND IN ROCK UNLESS THERE BE A CRADLE UNDERNEATH THE PIPE, IN WHICH CASE THE NORMAL DEPTH SHALL BE MEASURED TO THE UNDERSIDE OF THE CRADLE. THE WIDTH OF THE TRENCH FOR THE CRADLE SHALL BE ASSUMED TO BE THAT ABOVE SPECIFIED FOR PIPES IN TRENCH.

NO ALLOWANCE WILL BE MADE FOR ADDITIONAL WIDTH OR DEPTH OF TRENCH FOR BELL HOLES OR AT THE

FOR OTHER STRUCTURES, THE NORMAL WIDTH SHALL BE MEASURED BETWEEN VERTICAL PLANES 1 FOOT OUTSIDE THE NEAT LINES OF THE SEVERAL PARTS OF THE STRUCTURE, EXCEPT THAT THE WIDTH AT ANY ELEVATION SHALL BE MEASURED AS NOT LESS THAN THE WIDTH AT A LOWER ELEVATION. THE NORMAL DEPTH SHALL BE MEASURED TO THE UNDERSIDE OF THAT PART OF THE STRUCTURE FOR WHICH THE EXCAVATION IS MADE.

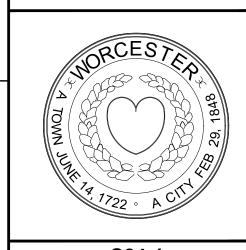


TYPICAL DRAIN MAIN TRENCH

TYPICAL SEWER MAIN TRENCH

TYPICAL TRENCH DETAILS

山 20



S24-1 STORMWATER INFASTRUCTURE IMPROVEMENTS - ARPA **WORCESTER, MA**

TYPICAL SEWER & DRAIN DETAILS

| DRAWN BY: | XXX |
|------------|---------------------------|
| CHECKED BY | : XXX |
| SCALE: (H) | NO SCALE |
| SCALE: (V) | NO SCALE |
| CAD I.D.: | S-24 ARPA.DWG |
| DATE: | SEPTEMBER 25, 2024 |
| | |

SHEET 6 OF 6