

# KIMBALL UNION ACADEMY (KUA): KILTON AND WELCH BUILDINGS

## MAY 15, 2023 PERMIT SET

THESE DRAWINGS ARE ONLY FOR THE KILTON AND WELCH BUILDINGS SITE WORK AND CIVIL DRAWINGS

FOR KILTON DORM RELATED DRAWINGS SEE "2023-05-15 PERMIT SET\_KILTON DORM"  
FOR WELCH DORM RELATED DRAWINGS SEE "2023-05-15 PERMIT SET\_WELCH DORM"



Locator Map / Aerial Photo (NOT TO SCALE)

### PROJECT INFORMATION

#### Primary State Adopted Codes

#### NH State Building Code

- ICC International Building Code (IBC) 2018 w/ NH Amendments
- ICC International Existing Building Code (IEBC) 2018 w/ NH Amendments
- ICC A117.1-2009
- ICC International Plumbing Code (IPC) 2018 w/ NH Amendments
- ICC International Mechanical Code (IMC) 2018 w/ NH Amendments
- ICC International Energy Conservation Code (IECC) 2018 w/ NH Amendments
- NFPA 70 National Electric Code 2020 w/ NH Amendments

#### NH State Fire Code

- NFPA 1, Fire Code 2018
- NFPA 101, Life Safety Code 2018

\*When a conflict between codes is identified, IBC applies for all categories, or where one code or standard has a requirement and another code or standard does not have a requirement the code or standard with a requirement shall apply.

#### USE AND OCCUPANCY CLASSIFICATION

NFPA - 6.1.14.3.2 - Building Occupancy is a mixed combination of Assembly, Residential, and Storage. Building shall comply to most restrictive - **Assembly**.

#### PROGRAM INFORMATION

##### KILTON:

20 new student beds  
8 Renovated beds  
2 new faculty residences  
1 renovated faculty residence  
Existing Dorm Area 2,644 gsf  
Existing Faculty Residence 2,280 gsf  
New Dorm Area 11,407 gsf  
New Faculty Residence A 2,795 gsf  
New Faculty Residence B 2,328 gsf

##### WELCH:

19 new student beds  
1 new faculty residence  
1 renovated faculty residence  
Existing Faculty Residence 2,704 gsf  
New Dorm Area 10,735 gsf  
New Faculty Residence A 2,776 gsf

#### TYPES OF CONSTRUCTION

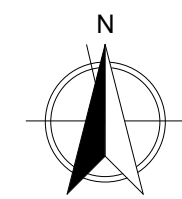
IBC 2018 - Fire Resistance Ratings Requirements for building elements in a **Type VB** Building shall be:

Bearing Walls - Exterior 0 hours  
Bearing Walls - Interior 0 hours  
Floor - Ceiling assemblies - 0 hours  
Roof - Ceiling assemblies - 0 hours  
Interior non-bearing walls - 0 hours  
Exterior non-bearing walls - 0 hours

Building shall equipped throughout with a type NFPA 13 automatic sprinkler system.

1 HR fire-rated separation at exit enclosures, mechanical & electrical rooms, & elevators.

See Kilton & Welch Fire Egress Plans For All Common Path of Travel, Dead End Corridor, & Travel Distance Limits.



KILTON & WELCH CIVIL DRAWINGS				
NUMBER	NAME	SD SET	BID PACKAGE #1 03/27/23	PERMIT SET 05/15/23
C-0.1	SITE LEGEND & NOTES		X	X
C-1.1	EXISTING CONDITIONS		X	X
C-2.1	SITE PLAN		X	X
C-2.2	GRADING & DRAINAGE PLANS		X	X
C-2.3	UTILITY PLAN		X	X
C-2.4	EROSION CONTROL PLAN		X	X
C-3.1	SEWER PLAN AND PROFILES 1		X	X
C-3.2	SEWER PLAN AND PROFILES 2		X	X
C-4.1	SITE DETAILS		X	X
C-4.2	SEWER DETAILS		X	X
C-4.3	WATER DETAILS		X	X
C-4.4	STORMWATER DETAILS		X	X
C-4.5	EROSION CONTROL DETAILS		X	X

KILTON & WELCH ELECTRICAL DRAWINGS				
NUMBER	NAME	BID PACKAGE 1	PERMIT SET	
E1	ELECTRICAL NOTES, LEGEND, DETAILS		X	X
E2	ELECTRICAL SITE PLAN		X	X
E3	ELECTRICAL ONE LINE DIAGRAM		X	X
E4	ELECTRICAL LUMINAIRE SCHEDULE		X	X
EK5	KILTON ELECTRICAL DEMOLITION		X	X
EK6	KILTON ELECTRICAL BASEMENT		X	X
EK7	KILTON LIGHTING FIRST FLOOR		X	X
EK8	KILTON LIGHTING SECOND FLOOR		X	X
EK9	KILTON POWER & SIGNAL FIRST FLOOR		X	X
EK10	ELECTRICAL PANEL SCHEDULES		X	X
EW1.1	WELCH ELECTRICAL DEMOLITION		X	X
EW1.2	WELCH ELECTRICAL BASEMENT		X	X
EW1.3	WELCH ELECTRICAL FIRST FLOOR		X	X
EW1.4	WELCH ELECTRICAL SECOND FLOOR		X	X
EW1.5	ELECTRICAL PANEL SCHEDULES		X	X
E16	ELECTRICAL SCHEDULES		X	X
LV1	LOW VOLTAGE NOTES & DIAGRAM		X	X
LVK2	KILTON LOW VOLTAGE BASEMENT		X	X
LVK3	KILTON LOW VOLTAGE FIRST FLOOR		X	X
LVK4	KILTON LOW VOLTAGE SECOND FLOOR		X	X
LVW5	WELCH LOW VOLTAGE		X	X

KILTON & WELCH ARCHITECTURAL DRAWINGS				
NUMBER	NAME	SD SET	BID PACKAGE #1 03/27/23	PERMIT SET 05/15/23
A-0.0	COVER SHEET		X	X
A-0.1	LEGEND & ARCHITECTURAL INFORMATION		X	X
A-0.2	TYPICAL ACCESSIBILITY DETAILS		X	X
A-0.3	ARCHITECTURAL SITE PLAN		X	X
AL-1.0	LANDSCAPE PLAN		X	X
AL-1.1	ENLARGED PLANTING PLANS & DETAILS		X	X

AK-0.4	FIRE EGRESS PLANS		X	X
AK-0.5	ASSEMBLY TYPES		X	X
AK-0.6	INTERIOR PARTITIONS		X	X
AK-1.0	EXISTING/DEMO PLANS		X	X
AK-2.1	BASEMENT PLAN		X	X
AK-2.2	FIRST FLOOR PLAN		X	X
AK-2.3	SECOND FLOOR PLAN		X	X
AK-2.4	FACULTY RESIDENCE A PLANS		X	X
AK-2.5	FACULTY RESIDENCE B PLANS		X	X
AK-2.6	ROOF PLAN		X	X
AK-3.1	BASEMENT RCP		X	X
AK-3.2	FIRST FLOOR RCP		X	X
AK-3.3	SECOND FLOOR RCP		X	X
AK-4.1	DORM ELEVATIONS		X	X
AK-4.2	FACULTY RESIDENCE ELEVATIONS		X	X
AK-5.0	BUILDING SECTIONS AT EXISTING		X	X
AK-5.1	BUILDING SECTIONS AT NEW		X	X
AK-5.2	BUILDING SECTIONS AT NEW		X	X
AK-5.3	BUILDING SECTIONS AT NEW		X	X
AK-6.0	EXTERIOR WALL SECTIONS AT EXISTING		X	X
AK-6.1	EXTERIOR WALL SECTIONS AT NEW		X	X
AK-6.2	EXTERIOR WALL SECTIONS AT NEW		X	X
AK-6.3	DETAILS		X	X
AK-6.4	DETAILS		X	X
AK-6.5	DETAILS		X	X
AK-6.6	DETAILS		X	X
AK-6.8	ROOF DETAILS		X	X
AK-6.10	INTERIOR DETAILS		X	X
AK-6.11	INTERIOR DETAILS		X	X
AK-7.1	ENLARGED COMMON AREA DRAWINGS		X	X
AK-7.1a	ENLARGED COMMON AREA ELEVATIONS		X	X
AK-7.2	ENLARGED PLANS & ELEVATIONS GEAR & KITCHEN		X	X
AK-7.3	ENLARGED PLANS & ELEVATIONS UPPER LOUNGE		X	X
AK-7.4	ENLARGED BATHROOM DRAWINGS		X	X
AK-7.5	ENLARGED BATHROOM DRAWINGS		X	X
AK-7.6	ENLARGED FACULTY RESIDENCE A DRAWINGS		X	X
AK-7.7	ENLARGED FACULTY RESIDENCE A DRAWINGS		X	X
AK-7.8	ENLARGED DORM ROOM DRAWINGS		X	X
AK-8.1	DORM STAIR A DETAILS		X	X
AK-8.2	DORM STAIR B DETAILS		X	X
AK-8.3	FACULTY RESIDENCE STAIR DETAILS		X	X
AK-8.4	STAIR DETAILS		X	X
AK-8.5	ELEVATOR DRAWINGS		X	X
AK-9.1	MILLWORK		X	X
AK-10.1	INTERIOR FINISHES SCHEDULE		X	X
AK-10.1a	FLOOR FINISH PLANS		X	X
AK-10.2	WINDOW SCHEDULE		X	X
AK-10.3	WINDOW DETAILS		X	X
AK-10.4	DOOR SCHEDULE		X	X
AK-10.5	DOOR SCHEDULE & DETAILS		X	X
AK-10.6	DOOR DETAILS		X	X

AW-0.4	FIRE EGRESS PLANS		X	X
AW-0.5	ASSEMBLY TYPES		X	X
AW-0.6	INTERIOR PARTITIONS		X	X
AW-1.0	EXISTING/DEMO PLANS		X	X
AW-2.1	BASEMENT PLAN		X	X
AW-2.2	FIRST FLOOR PLAN		X	X
AW-2.3	SECOND FLOOR PLAN		X	X
AW-2.4	FACULTY RESIDENCE PLANS		X	X
AW-2.5	ROOF PLAN		X	X
AW-3.1	BASEMENT RCP		X	X
AW-3.2	FIRST FLOOR RCP		X	X
AW-3.3	SECOND FLOOR RCP		X	X
AW-4.1	DORM ELEVATIONS		X	X
AW-4.2	FACULTY RESIDENCE ELEVATIONS		X	X
AW-5.0	BUILDING SECTIONS AT EXISTING		X	X
AW-5.1	BUILDING SECTIONS AT NEW		X	X
AW-5.2	BUILDING SECTIONS AT NEW		X	X
AW-5.3	BUILDING SECTIONS AT NEW		X	X
AW-6.0	EXTERIOR WALL SECTIONS AT EXISTING		X	X
AW-6.1	EXTERIOR WALL SECTIONS AT NEW		X	X
AW-6.2	EXTERIOR WALL SECTIONS AT NEW		X	X
AW-6.3	DETAILS		X	X
AW-6.4	DETAILS		X	X
AW-6.5	DETAILS		X	X
AW-6.6	DETAILS		X	X
AW-6.8	ROOF DETAILS		X	X
AW-6.10	INTERIOR DETAILS		X	X
AW-7.1	ENLARGED COMMON AREA DRAWINGS		X	X
AW-7.2	ENLARGED PLANS & ELEVATIONS GEAR & KITCHEN		X	X
AW-7.3	ENLARGED PLANS & ELEVATIONS		X	X
AW-7.4	ENLARGED BATHROOM DRAWINGS		X	X
AW-7.5	ENLARGED BATHROOM DRAWINGS		X	X
AW-7.6	FACULTY RES. ENLARGED PLANS AND ELEVATIONS		X	X
AW-7.7	ENLARGED FACULTY RESIDENCE DRAWINGS		X	X
AW-7.8	ENLARGED DORM ROOM DRAWINGS		X	X
AW-8.1	DORM NORTH STAIR SECTIONS		X	X
AW-8.2	DORM SOUTH STAIR SECTIONS		X	X
AW-8.3	ALL FACULTY RESIDENCES STAIR SECTIONS		X	X
AW-8.4	STAIR DETAILS		X	X
AW-8.5	ELEVATOR DRAWINGS		X	X
AW-9.1	MILLWORK		X	X
AW-10.1	INTERIOR FINISHES SCHEDULE		X	X
AW-10.1a	FLOOR FINISH PLANS		X	X
AW-10.2	WINDOW SCHEDULE		X	X
AW-10.3	WINDOW DETAILS		X	X
AW-10.4	DOOR SCHEDULE		X	X
AW-10.5	DOOR SCHEDULE & DETAILS		X	X
AW-10.6	DOOR DETAILS		X	X

KILTON & WELCH STRUCTURAL DRAWINGS				
NUMBER	NAME	SD SET	BID PACKAGE #1	PERMIT SET 05/15/23
SK-0.1	GENERAL NOTES, BASIS OF DESIGN		X	X
SK-0.2	GENERAL NOTES		X	X
SK-0.3	SPECIAL INSPECTIONS		X	X
SK-1.0	FOUNDATION PLAN		X	X
SK-1.1	FIRST FLOOR FRAMING PLAN		X	X
SK-1.2	SECOND FLOOR FRAMING PLAN		X	X
SK-1.3	ROOF FRAMING PLAN		X	X
SK-1.4	FACULTY RESIDENCE 'A' PLANS		X	X
SK-2.0	TYPICAL FOUNDATION DETAILS		X	X
SK-2.1	FOUNDATION DETAILS		X	X
SK-3.0	TYPICAL FRAMING DETAILS		X	X
SK-3.1	FRAMING DETAILS		X	X
SK-3.2	FRAMING DETAILS		X	X
SK-3.3	TYPICAL TRUSS DETAILS		X	X
SK-3.4	TYPICAL SHEAR WALL DETAILS		X	X
SW-0.1	GENERAL NOTES, BASIS OF DESIGN		X	X
SW-0.2	GENERAL NOTES		X	X
SW-0.3	SPECIAL INSPECTIONS		X	X
SW-1.0	FOUNDATION PLAN		X	X
SW-1.1	FIRST FLOOR FRAMING PLAN		X	X
SW-1.2	SECOND FLOOR FRAMING PLAN		X	X
SW-1.3	ROOF FRAMING PLAN		X	X
SW-2.0	TYPICAL FOUNDATION DETAILS		X	X
SW-2.1	FOUNDATION DETAILS		X	X
SW-3.0	TYPICAL FRAMING DETAILS		X	X
SW-3.1	FRAMING DETAILS		X	X
SW-3.2	FRAMING DETAILS		X	X
SW-3.3	TYPICAL TRUSS DETAILS		X	X
SW-3.4	TYPICAL SHEAR WALL DETAILS		X	X

KILTON & WELCH MECHANICAL DRAWINGS				
NUMBER	NAME	BID PACKAGE 1	PERMIT SET	
MK-1.1	KILTON BASEMENT - AIR DISTRIBUTION		X	X
MK-1.2	KILTON FIRST FLOOR - AIR DISTRIBUTION		X	X
MK-1.3	KILTON SECOND FLOOR - AIR DISTRIBUTION		X	X
MK-2.1	KILTON BASEMENT - MECHANICAL PIPING		X	X
MK-2.2	KILTON FIRST FLOOR - MECHANICAL PIPING		X	X
MK-2.3	KILTON SECOND FLOOR - MECHANICAL PIPING		X	X
MK-3.1	MECHANICAL DETAILS		X	X
MK-3.2	MECHANICAL DETAILS		X	X
MK-3.3	MECHANICAL DETAILS		X	X
MK-4.1	MECHANICAL SCHEDULES		X	X
MK-4.2	MECHANICAL SCHEDULES		X	X
MW-1.1	WELCH BASEMENT - AIR DISTRIBUTION		X	X
MW-1.2	WELCH FIRST FLOOR - AIR DISTRIBUTION		X	X
MW-1.3	WELCH SECOND FLOOR - AIR DISTRIBUTION		X	X
MW-2.1	WELCH BASEMENT - MECHANICAL PIPING		X	X
MW-2.2	WELCH FIRST FLOOR - MECHANICAL PIPING		X	X
MW-2.3	WELCH SECOND FLOOR - MECHANICAL PIPING		X	X
MW-3.1	MECHANICAL DETAILS		X	X
MW-3.2	MECHANICAL DETAILS		X	X
MW-3.3	MECHANICAL DETAILS		X	X
MW-4.01	MECHANICAL SCHEDULES		X	X
MW-4.02	MECHANICAL SCHEDULES		X	X

KILTON & WELCH PLUMBING DRAWINGS				
NUMBER	NAME	BID PACKAGE 1	PERMIT SET	
PK-1.1	KILTON BASEMENT - WASTE & VENT		X	X
PK-1.2	KILTON FIRST FLOOR - WASTE & VENT		X	X
PK-1.3	KILTON SECOND FLOOR - WASTE & VENT		X	X
PK-2.1	KILTON BASEMENT - DOMESTIC WATER		X	X
PK-2.2	KILTON FIRST FLOOR - DOMESTIC WATER		X	X
PK-2.3	KILTON SECOND FLOOR - DOMESTIC WATER		X	X
PK-3.1	KILTON BASEMENT - CONDENSATE		X	X
PK-3.2	KILTON SECOND FLOOR - CONDENSATE		X	X
PK-4.1	KILTON - PLUMBING DETAILS		X	X
PK-4.2	KILTON - PLUMBING SCHEDULES		X	X
PW-1.1	WELCH BASEMENT & FIRST FLOOR - WASTE & VENT		X	X
PW-1.2	WELCH SECOND FLOOR - WASTE & VENT		X	X
PW-2.1	WELCH BASEMENT & FIRST FLOOR - DOMESTIC WATER		X	X
PW-2.2	WELCH SECOND FLOOR - DOMESTIC WATER		X	X
PW-3.1	WELCH BASEMENT & FIRST FLOOR - CONDENSATE		X	X
PW-3.2	WELCH SECOND FLOOR - CONDENSATE		X	X
PW-4.1	WELCH - PLUMBING DETAILS		X	X
PW-4.2	WELCH - PLUMBING SCHEDULES		X	X



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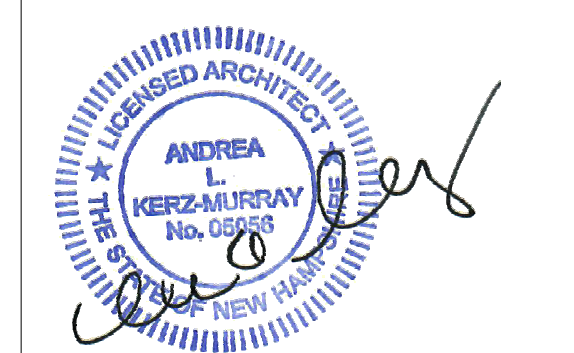
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#### ELECTRICAL ENGINEER

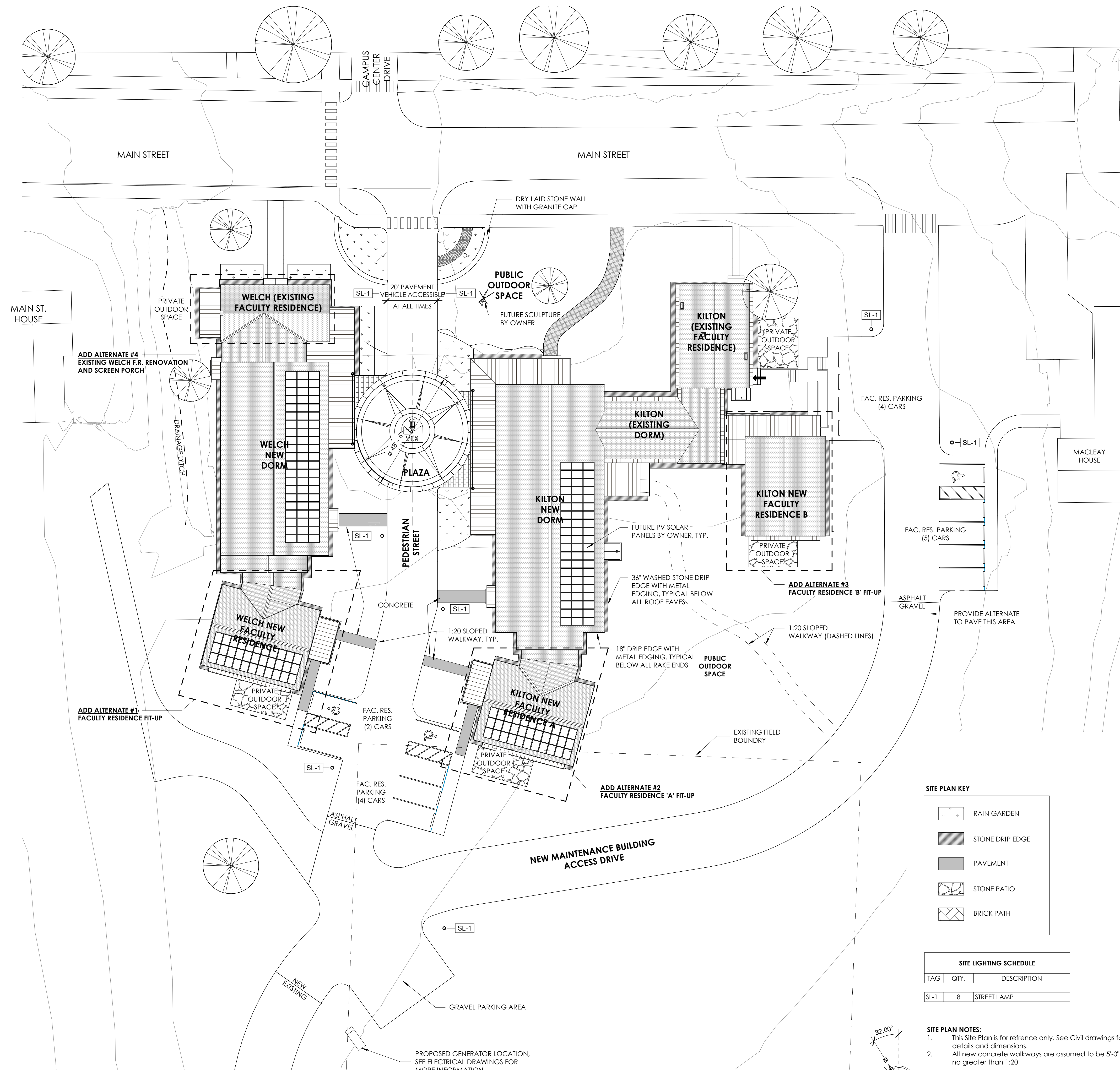
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1 Welch - Kilton Site Plan  
1" = 20'-0"

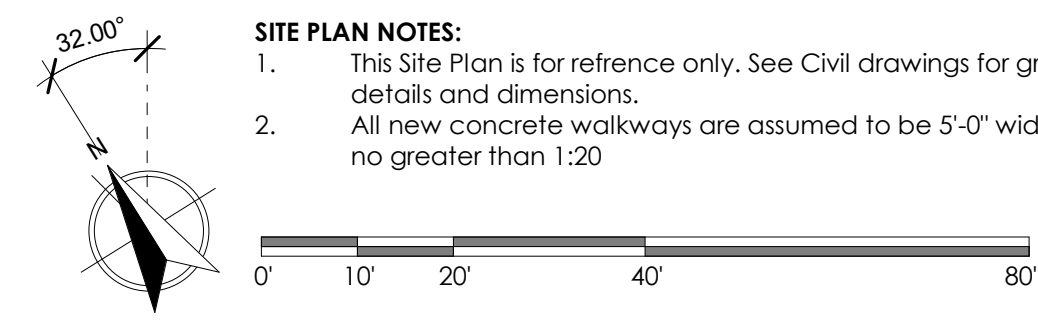
**SITE PLAN KEY**

[Symbol]	RAIN GARDEN
[Symbol]	STONE DRIP EDGE
[Symbol]	PAVEMENT
[Symbol]	STONE PATIO
[Symbol]	BRICK PATH

**SITE LIGHTING SCHEDULE**

TAG	QTY.	DESCRIPTION
SL-1	8	STREET LAMP

- SITE PLAN NOTES:**
- This Site Plan is for reference only. See Civil drawings for grading and site details and dimensions.
  - All new concrete walkways are assumed to be 5'-0" wide, with a slope no greater than 1:20



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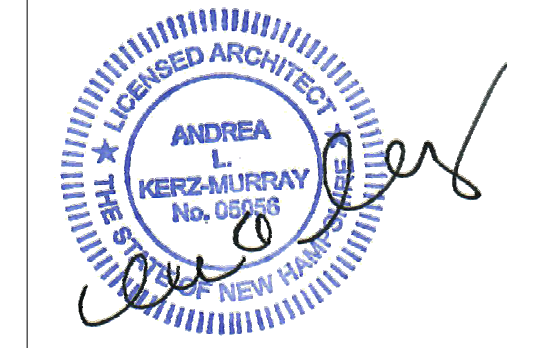
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DATE ISSUED: 05/15/23  
Drawn: SR  
Checked: SR

**REVISIONS:**

#	Date	Description

PERMIT SET 05/15/2023

**KUA  
KILTON/WELCH  
DORMITORIES**

Main Street,  
Meriden, NH 03770

**ARCHITECTURAL  
SITE PLAN**

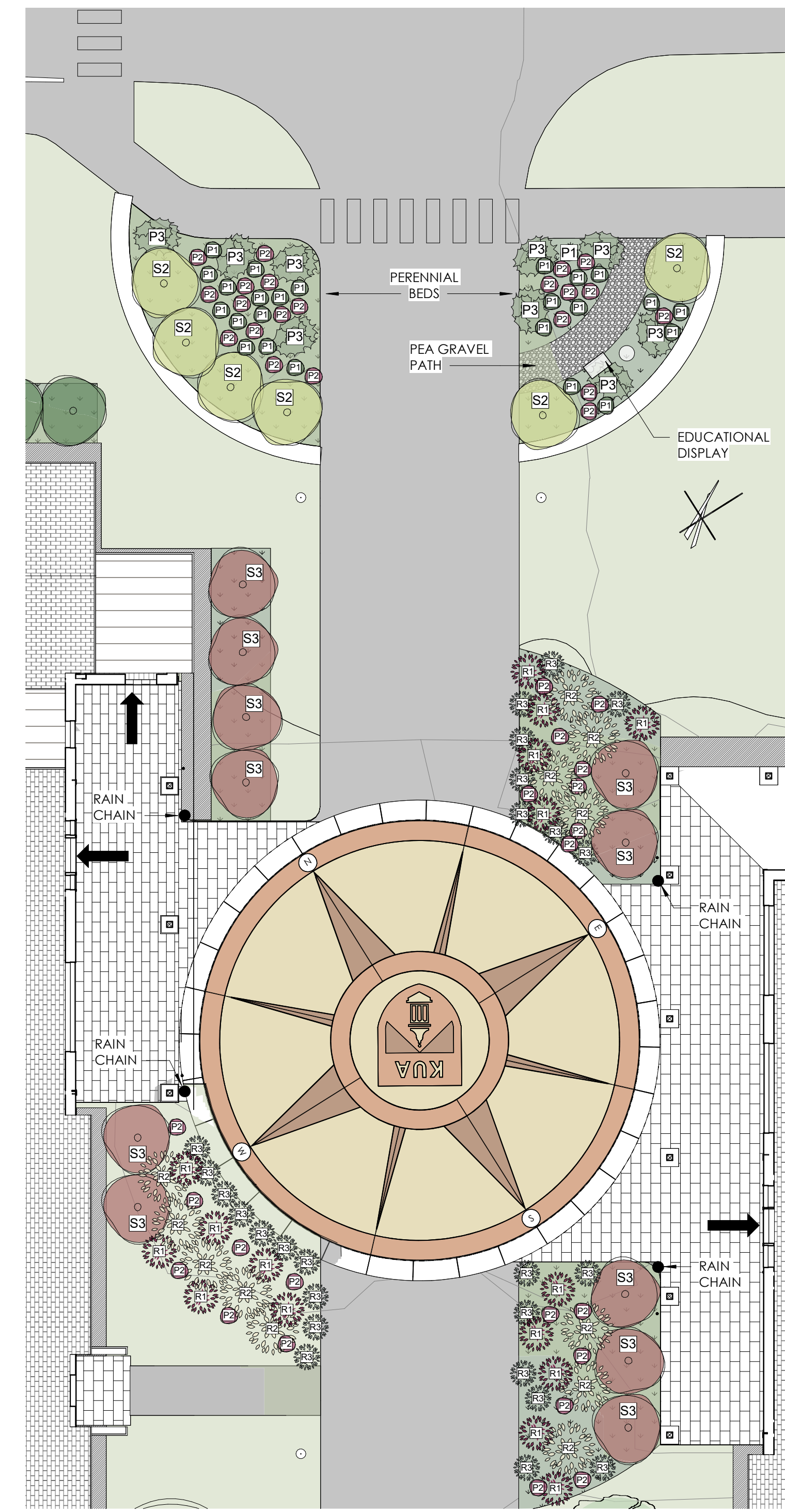
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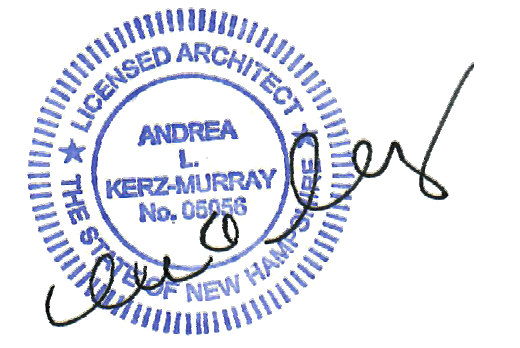
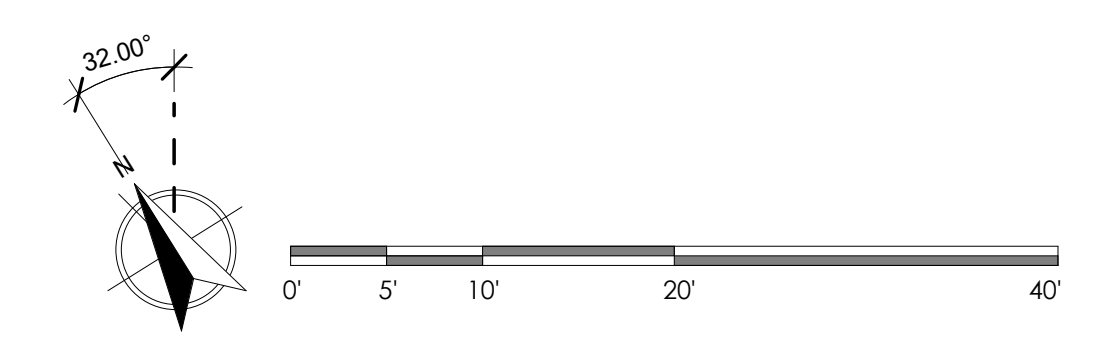




PLANTING SCHEDULE			
TAG	COMMON NAME	BOTANICAL NAME	MATURE SIZE
P1	SHASTA DAISY 'SNOW CAP'	LEUCANTHEMUM SUPERBIUM	18-24" HIGH
P2	BEE BALM 'PARDON MY CERISE'	MONDARDA DIDYMA	14-18" HIGH
P3	PURPLELEAF WINTERCREEPER	EUNONYMUS FORTUNEI	
R1	CINNAMON FERN	OSMUNDASTRUM CINNAMOMEUM	6' TALL
R2	TUSsock SEDGE	CAREX STRICTA	3' TALL x 2' WIDE
R3	BLUE SEDGE	CAREX FLACCA	8-10' TALL x 18" WIDE
S1	RHODODENDRON 'PJM WHITE FORM'	RHODODENDRON PJM WHITE FORM	3-4' TALL x 3'6" WIDE
S2	FOTHERGILLA	FOTHERGILLA GARDENII	3' TALL x 3' WIDE
S3	WINTERBERRY	ILEX VERTICILLATA	3' TALL x 3' WIDE
S4	EMERALD GREEN ARBORVITAE	THUJA OCCIDENTALIS	12' TALL x 4' WIDE
T1	RED MAPLE	ACER RUBRUM	50' TALL x 20' WIDE
T2	TREE LILAC	SYRINGA RETICULATA	30' TALL x 25' WIDE
T3	FLOWERING CRABAPPLE	MALUS 'PRAIRIFIRE'	25' TALL x 25' WIDE



2 Plaza & Rain Gardens Enlarged Plan  
1" = 10'-0"



DATE ISSUED: 05/15/23  
Drawn: SC  
Checked: SR

REVISIONS:

#	Date	Description
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PERMIT SET 05/15/2023

KUA  
KILTON/WELCH  
DORMITORIES

Main Street,  
Meriden, NH 03770

ENLARGED  
PLANTING PLANS  
& DETAILS

AL-1.1



## STANDARD ABBREVIATIONS

BENCHMARK	BM	END OF VERTICAL CURVE ELEVATION	EVCE	LIMITS OF CONSTRUCTION	LOC	REINFORCED CONCRETE PIPE	RCP
BEGINNING OF VERTICAL CURVE ELEVATION	BVCE	END OF VERTICAL CURVE STATION	EVCS	LIMITS OF DISTURBANCE	LOD	RIGHT-OF-WAY	ROW
BEGINNING OF VERTICAL CURVE STATION	BVCS	EXISTING	EX	MAXIMUM	MAX	SANITARY	SAN
CAST-IN-PLACE	CIP	EXISTING GRADE/GROUND	EG	MINIMUM	MIN	SANITARY MANHOLE	SMH
CAST IRON	CI	FINISHED FLOOR	FF	MANUAL OR UNIFORM TRAFFIC CONTROL DEVICES	MUTCD	SEPTIC TANK	ST
CATCH BASIN	CB	FINISHED GRADE/GROUND	FG	MONITORING WELL	MW	SILT FENCE	SF
CENTERLINE	CL	FIELD INLET	FI	MONUMENT	MON	SLOPE	S=
CLEAN OUT	C/O	FLARED END SECTION	FES	NOT IN CONTRACT	NIC	STATION	STA
CORRUGATED METAL PIPE	CMP	FOOT, FEET	FT	NOT TO SCALE	NTS	STORM MANHOLE	DMH
CUBIC FEET	CF	FOOTING	FTG	POINT OF CURVATURE	PC	TANGENT	TAN
CUBIC FEET PER SECOND	CFS	FOUNDATION	FND	POINT OF INTERSECTION	PI	TANGENT TO CURVE	TC
CUBIC YARD	CY	GALLONS PER MINUTE	GPM	POLYETHYLENE, PROFESSIONAL ENGINEER	PE	TAPPING SLEEVE AND VALVE	TS&V
DIAMETER	DIA	GATE VALVE	GV	PROPERTY LINE	PL	TEMPORARY BENCHMARK	TBM
DISTRIBUTION BOX	D-BOX	HEADWALL	HW	TEST PIT	TP		
DUCTILE IRON	DI	HIGH DENSITY POLYETHYLENE	HDPE	PERC TEST, POINT OF TANGENCY	PT	TOP OF BANK	TOB
EDGE OF CONCRETE	EOC	HYDRANT	HYD	POLYVINYL CHLORIDE	PVC	TOP OF CURB	TOC
EDGE OF GRAVEL	EOG	INTERSECTION	INT	POINT OF VERTICAL INTERSECTION	PVI	TOP OF WALL	TOW
EDGE OF PAVEMENT	EOP	INVERT	INV	POND	PND	TYPICAL	TYP
ELECTRIC	ELEC	IRON PIN	IP	POINT OF INTERSECTION	PI	VERIFY IN FIELD	VIF
ELECTRIC MANHOLE	EMH	IRON PIPE SIZE	IPS	QUANTITY	QTY	WATER VALVE	WV
ELEVATION	ELEV	LENGTH	L=	QUALITY ASSURANCE	QA		
				QUALITY CONTROL	QC		
				RADIUS	R=		

## GENERAL NOTES

- EXACT OBJECT LOCATIONS MAY DIFFER FROM THAT AS SHOWN, AND ADDITIONAL SUB-SURFACE AND SURFACE UTILITIES AND STRUCTURES MAY EXIST. THE CONTRACTOR IS TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK.
- UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES. ALL DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND ENGINEER. SITE CONTRACTOR SHALL CALL UTILITY LOCATOR SERVICE AND UTILITY OWNERS 72 HOURS, EXCLUSIVE OF WEEKENDS AND HOLIDAYS, PRIOR TO ANY DIGGING, DRILLING, OR BLASTING.
  - DIG SAFE (TEL: #811)
  - NON DIG SAFE MEMBER FACILITY OPERATORS IF KNOWN. A LIST OF DIG SAFE MEMBERS BY STATE CAN BE FOUND ON THE DIG SAFE WEB SITE WWW.DIGSAFE.COM
- THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL FROM THE ENGINEER.
- THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
- THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO EXISTING CONDITIONS OR BETTER AS DETERMINED BY THE ENGINEER. ANY DAMAGED TREES, SHRUBS AND/OR HEDGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
- THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, AND CERTIFICATES.
- THE CONTRACTOR WILL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A NEW HAMPSHIRE STATE LICENSED LAND SURVEYOR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS, AND COORDINATE WORK WITH ALL CONTRACTS FOR THE SITE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT EXPLORATORY TEST PITS AS MAY BE REQUIRED TO DETERMINE UNDERGROUND CONDITIONS.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS FOR CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
- MAINTAIN FLOW FOR ALL EXISTING UTILITIES, UNLESS NOTED OTHERWISE.
- ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONTRACTOR TO GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND IMPERVIOUS SURFACES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE CONTRACTOR SHALL PROVIDE MARKED-UP AS-BUILT PLANS FOR ALL UTILITIES SHOWING CONNECTIONS, BENDS, VALVES, LENGTHS OF LINES AND INVERTS. AS-BUILT PLANS SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION, MONITORING, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES AND TAKING PRECAUTIONARY STEPS TO AVOID ANY SEDIMENT TRANSFER TO NEIGHBORING SITES OR WATERS OF THE STATE.

## SYMBOL LEGEND

PROPOSED FEATURES	EXISTING FEATURES
BOUND	BOUND
BENCHMARK	BENCHMARK
DRILL HOLE	DRILL HOLE
SURVEY POINT	SURVEY POINT
IRON PIN	IRON PIN
TP1	TP1
TEST PIT	TEST PIT
B1	B1
BORING	BORING
P1	P1
PERC TEST	PERC TEST
CATCH BASIN (SQUARE)	CATCH BASIN (SQUARE)
CATCH BASIN (ROUND)	CATCH BASIN (ROUND)
HEADWALL	HEADWALL
FLARED END SECTION	FLARED END SECTION
STONE APRON	STONE APRON
DRAIN MANHOLE (DMH)	DRAIN MANHOLE (DMH)
DRAINAGE CLEAN OUT	DRAINAGE CLEAN OUT
SANITARY SEWER MANHOLE (SMH)	SANITARY SEWER MANHOLE (SMH)
SANITARY CLEAN OUT	SANITARY CLEAN OUT
HYDRANT	HYDRANT
WATER SHUTOFF	WATER SHUTOFF
TAPPING SLEEVE & VALVE	TAPPING SLEEVE & VALVE
GATE VALVE	GATE VALVE
WELL	WELL
UTILITY POLE	UTILITY POLE
GUY POLE	GUY POLE
ELECTRICAL MANHOLE	ELECTRICAL MANHOLE
BUILDING MOUNTED LIGHT	FLOOD LIGHT
LIGHT POST	LIGHT POST
TELEPHONE MANHOLE	TELEPHONE MANHOLE
NATURAL GAS MANHOLE	NATURAL GAS MANHOLE
COMMUNICATION MANHOLE	COMMUNICATION MANHOLE
BOLLARD	BOLLARD
SINGLE POLE SIGN	SINGLE POLE SIGN
DOUBLE POLE SIGN	DOUBLE POLE SIGN
SPOT ELEVATION	SPOT ELEVATION
ACCESSIBLE PARKING STALL	ACCESSIBLE PARKING STALL
DRAINAGE FLOW	DRAINAGE FLOW
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE

## SURVEY NOTES

- TOPOGRAPHIC AND PHYSICAL FEATURES TAKEN FROM A FIELD SURVEY PREPARED BY DIBERNARDO ASSOCIATES ON DECEMBER 15, 2022.
- THE VERTICAL DATUM IS NAVD 1988. THE HORIZONTAL DATUM IS THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM.
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## WILDLIFE PROTECTION NOTES

- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NH823-0576, KUA KILTON/WELCH DORMATORIES, WILDLIFE SPECIES OBSERVATION.
- PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION AS FEASIBLE.
- IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN FIS 1002.04
- THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

## LINETYPE LEGEND

PROPOSED FEATURES	EXISTING FEATURES
100 MAJOR CONTOUR	100 MAJOR CONTOUR
98 MINOR CONTOUR	98 MINOR CONTOUR
EDGE OF RIVER	EDGE OF RIVER
EDGE OF POND	EDGE OF POND
FLOOD PLAN	FLOOD PLAN
PROPERTY LINE	PROPERTY LINE
RIGHT OF WAY	RIGHT OF WAY
SETBACK	SETBACK
EASEMENT	EASEMENT
LIMIT OF CONSTRUCTION	LIMIT OF CONSTRUCTION
LIMIT OF DISTURBANCE	LIMIT OF DISTURBANCE
SILT FENCE	SILT FENCE
DEMOLITION WORK	DEMOLITION WORK
CENTERLINE	CENTERLINE
EDGE OF PAVEMENT	EDGE OF PAVEMENT
EDGE OF GRAVEL	EDGE OF GRAVEL
EDGE OF CONCRETE	EDGE OF CONCRETE
CURB	CURB
FENCE (BARBED WIRE)	FENCE (BARBED WIRE)
FENCE (CHAIN LINK)	FENCE (CHAIN LINK)
FENCE (WOODEN)	FENCE (WOODEN)
GUARD RAIL	GUARD RAIL
TREE LINE	TREE LINE
EDGE OF WETLANDS - DELINEATED	EDGE OF WETLANDS - APPROXIMATE
STONE WALL	STONE WALL
SANITARY SEWER	SANITARY SEWER
SANITARY SEWER APPROX.	SANITARY SEWER APPROX.
SEWER FORCEMAIN	SEWER FORCEMAIN
SEWER SERVICE	SEWER SERVICE
DISPOSAL AREA LATERAL	DISPOSAL AREA LATERAL
STORM LINE	STORM LINE
STORM LINE APPROX.	STORM LINE APPROX.
UNDER DRAIN	UNDER DRAIN
FOUNDATION DRAIN	FOUNDATION DRAIN
ROOF DRAIN	ROOF DRAIN
DITCH/SWALE	DITCH/SWALE
TELECOMM	TELECOMM
TELECOMM APPROX.	TELECOMM APPROX.
UNDERGROUND TELECOMM	UNDERGROUND TELECOMM
OVERHEAD TELECOMM	OVERHEAD TELECOMM
ELECTRIC LINE	ELECTRIC LINE
ELECTRIC APPROX.	ELECTRIC APPROX.
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
OVERHEAD ELECTRIC	OVERHEAD ELECTRIC
ELECTRICAL SITE LIGHTING	ELECTRICAL SITE LIGHTING
WATER LINE	WATER LINE
WATER APPROX.	WATER APPROX.
WATER SERVICE	WATER SERVICE
GAS LINE	GAS LINE
GAS APPROX.	GAS APPROX.
CABLE TV	CABLE TV
UNDERGROUND CABLE TV	UNDERGROUND CABLE TV
OVERHEAD CABLE TV	OVERHEAD CABLE TV
STEAM LINE	STEAM LINE
LOW PRESSURE STEAM	LOW PRESSURE STEAM
HIGH PRESSURE STEAM	HIGH PRESSURE STEAM
HOT WATER	HOT WATER
CHILLED WATER	CHILLED WATER



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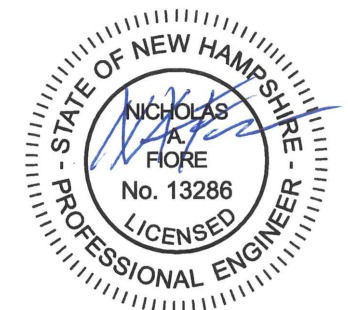
DATE ISSUED: 03/27/2023

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REVISIONS:

#	Date	Description



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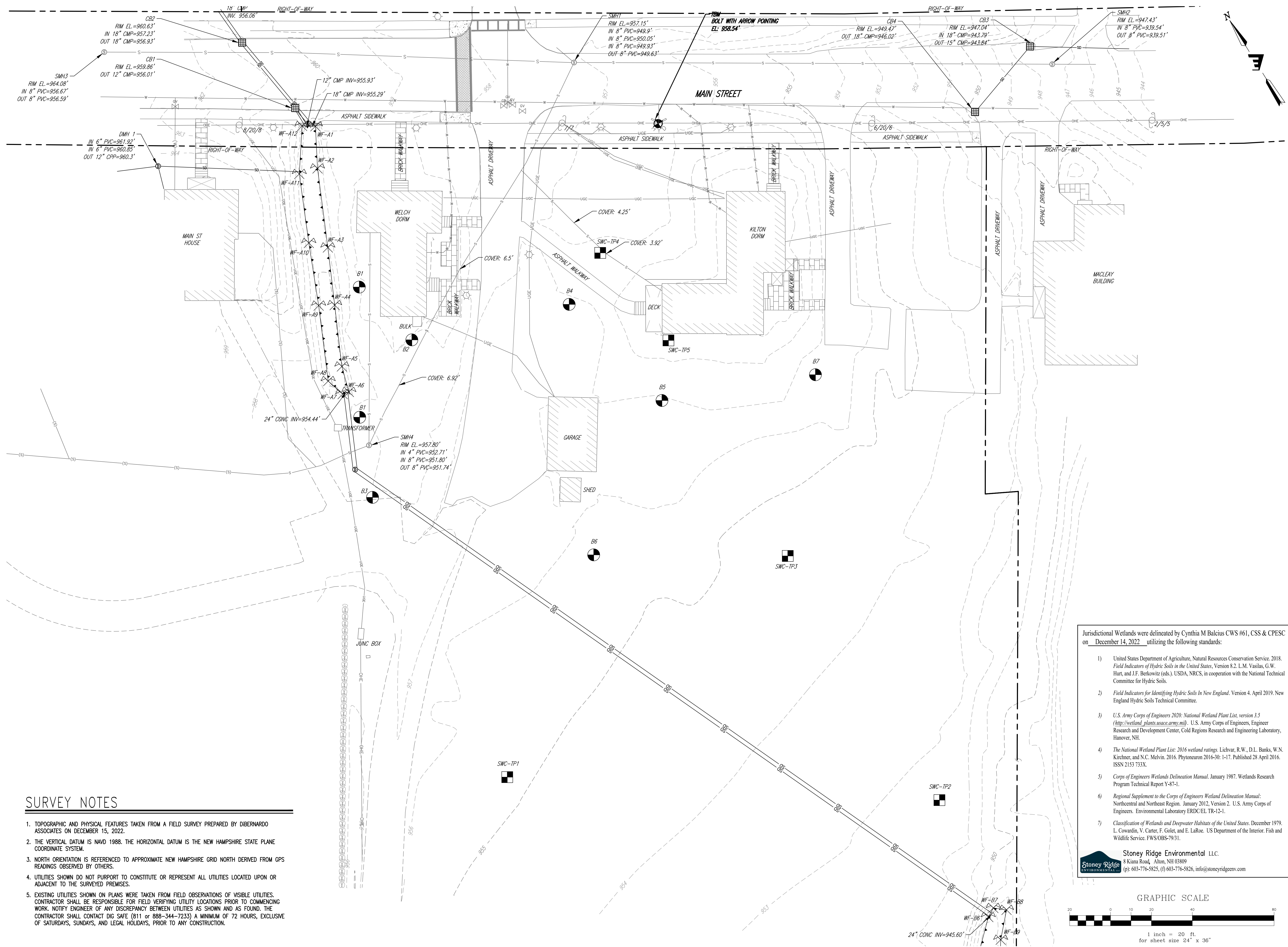
KUA  
KILTON/WELCH  
DORMATORIES

Main Street,  
Meriden, NH 03770

SITE LEGEND  
AND NOTES

C0.1





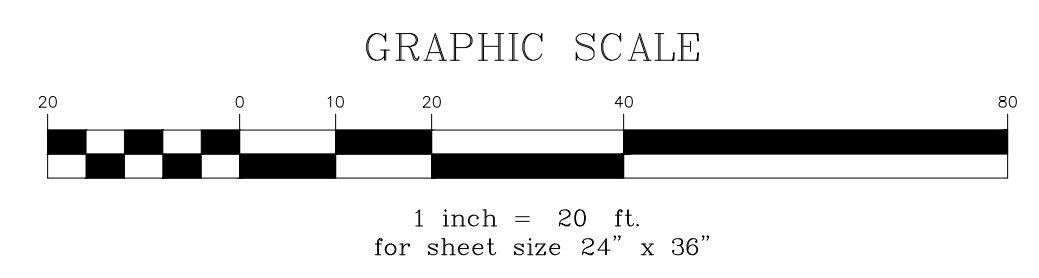
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Jurisdictional Wetlands were delineated by Cynthia M Balcius CWS #61, CSS & CPESC on December 14, 2022 utilizing the following standards:

- 1) United States Department of Agriculture, Natural Resources Conservation Service. 2018. *Field Indicators of Hydric Soils in the United States*, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
- 2) *Field Indicators for Identifying Hydric Soils in New England*. Version 4, April 2019. New England Hydric Soils Technical Committee.
- 3) *U.S. Army Corps of Engineers 2020: National Wetland Plant List, version 3.5* (<http://wetland.plants.usace.army.mil/>). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH.
- 4) *The National Wetland Plant List: 2016 wetland ratings*. Lichtvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.
- 5) *Corps of Engineers Wetlands Delineation Manual*. January 1987. Wetlands Research Program Technical Report Y-87-1.
- 6) *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*. January 2012, Version 2. U.S. Army Corps of Engineers. Environmental Laboratory ERDC/EL TR-12-1.
- 7) *Classification of Wetlands and Deepwater Habitats of the United States*. December 1979. L. Cowardin, V. Carter, F. Golet, and E. LaRoc. US Department of the Interior. Fish and Wildlife Service. FWS/OBS-79/31.

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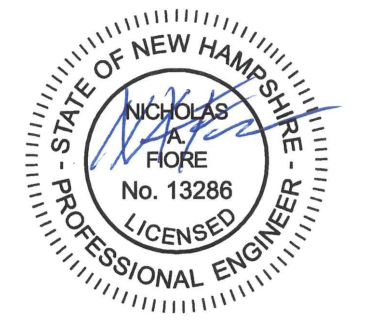
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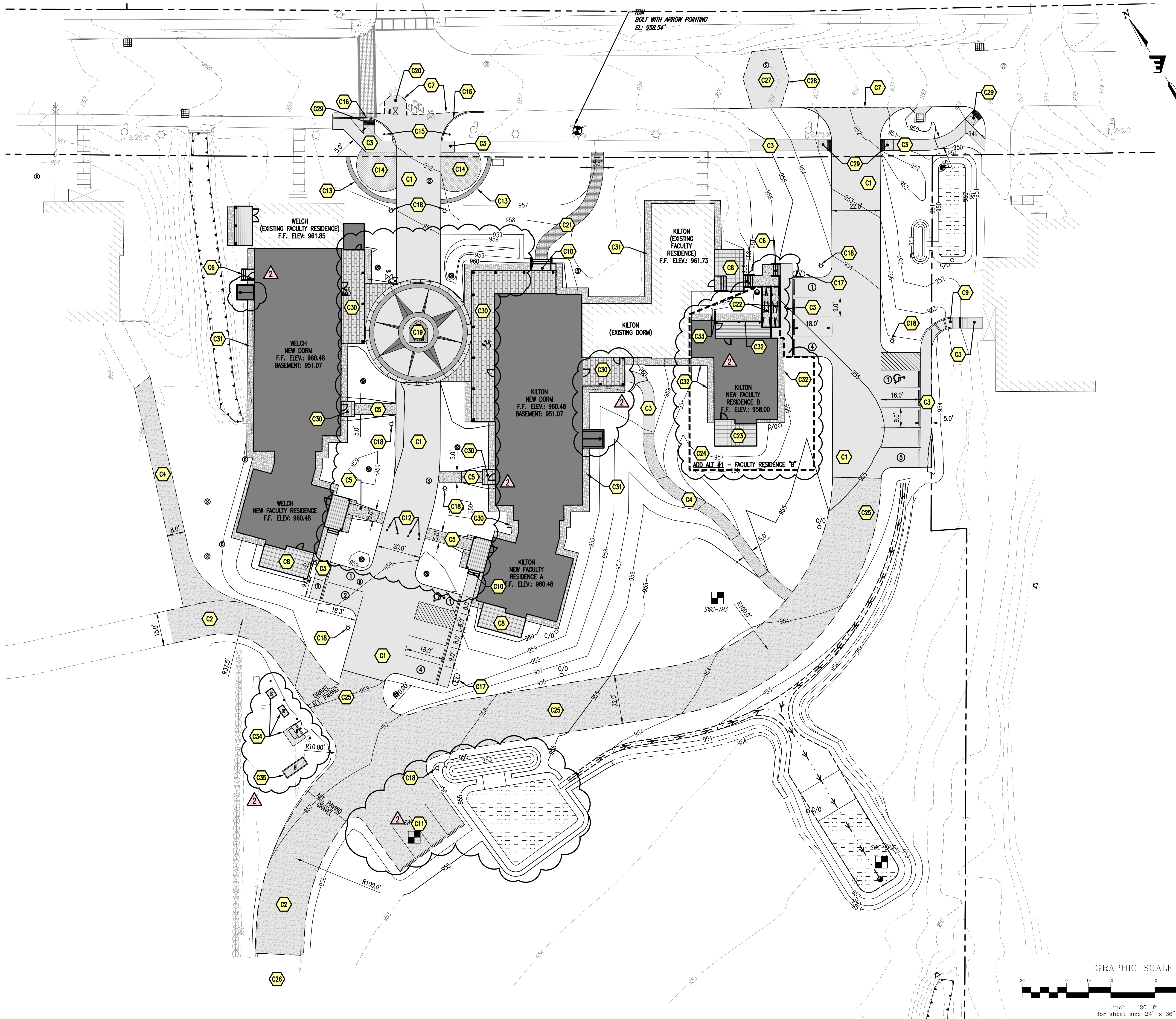
**KUA  
 KILTON/WELCH  
 DORMITORIES**

Main Street,  
 Meriden, NH 03770

**EXISTING  
 CONDITIONS**

**C1.1**





**SITE SCHEDULE**

- C1** ASPHALT DRIVEWAY/PARKING
- C2** GRAVEL DRIVEWAY
- C3** ASPHALT SIDEWALK
- C4** GRAVEL WALKWAY
- C5** CONCRETE SIDEWALK
- C6** CONCRETE STAIRS
- C7** SAWCUT EDGE OF PAVEMENT
- C8** PATIO AREA, REFER TO ARCHITECTURAL PLANS
- C9** TIMBER FRAMED LANDSCAPE STEPS WITH PEA GRAVEL SURFACE
- C10** WOODEN STAIRS, REFER TO ARCHITECTURAL PLANS AND DETAILS
- C11** GRAVEL PARKING
- C12** COLLAPSIBLE BOLLARD, TYP.
- C13** FREESTANDING SEATING WALL, REFER TO ARCHITECTURAL PLANS AND DETAILS
- C14** LANDSCAPING BED, REFER TO ARCHITECTURAL PLANS AND DETAILS
- C15** GRANITE POST
- C16** GRANITE CURB
- C17** ELECTRIC VEHICLE CHARGING STATION, REFER TO ELECTRICAL PLANS AND DETAILS
- C18** LIGHT POLE, REFER TO ELECTRICAL PLANS AND DETAILS
- C19** PLAZA AREA - STAMPED/COLORED CONCRETE WITH CAST IN PLACE METAL CREST AND CARDINAL POINTS LETTERS, REFER TO ARCHITECTURAL PLANS AND DETAILS
- C20** PERMANENT ASPHALT TRENCH PATCH
- C21** BRICK WALKWAY
- C22** ADD ALT #1 - CONCRETE ADA-RAMP
- C23** ADD ALT #1 - PATIO AREA, REFER TO ARCHITECTURAL PLANS
- C24** ADD ALT #1 - CONSTRUCTION OF FACILITY RESIDENCE "B" INCLUDING ASSOCIATED WALKWAYS, RAMPS, STAIRS, GRADING AND UTILITIES.
- C25** BASE BID - GRAVEL DRIVEWAY  
ADD ALT #4 - PAVE DRIVEWAY TO EXTENTS SHOWN
- C26** ADD ALT #5 - RECONSTRUCT AND PAVE SERVICE DRIVE FROM LIMIT OF PAVING INT. ADD ALT #4 TO EXISTING SERVICE BUILDING, 850 LF OF ROADWAY, 20 FEET WIDE.
- C27** ADD ALT #1 - PERMANENT ASPHALT TRENCH PATCH
- C28** ADD ALT #1 - SAWCUT EDGE OF PAVEMENT
- C29** CONCRETE PEDESTRIAN RAMP WITH ADA DETECTABLE WARNING PLATE
- C30** PAVERS SET ON CONCRETE SLAB, REFER TO LANDSCAPE PLANS FOR PAVES SPECIFICATIONS. REFER TO SHEET C4.1 FOR CONCRETE SLAB SPECIFICATIONS.
- C31** STONE DRIP EDGE, REFER TO SHEET C4.4 FOR DETAIL
- C32** ADD ALT #1 - STONE DRIP EDGE, REFER TO SHEET C4.4 FOR DETAIL
- C33** ADD ALT #1 - 6" GRANITE CURB LAWN STEP
- C34** CONCRETE PAD AND PROTECTION BOLLARDS FOR ELECTRICAL TRANSFORMERS AND SWITCH, REFER TO ELECTRICAL PLANS AND DETAILS
- C35** CONCRETE PAD FOR EMERGENCY GENERATOR, REFER TO ELECTRICAL PLANS AND DETAILS

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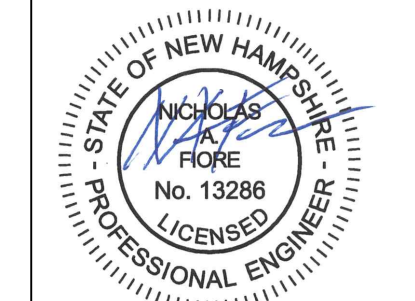
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Drawn: JWJ  
Checked: NAF

REVISIONS:

#	Date	Description
1	04.12.2023	ADDENDUM #1: BID SET #1
2	05.15.2023	SCOPE CHANGES TO BID SET #1



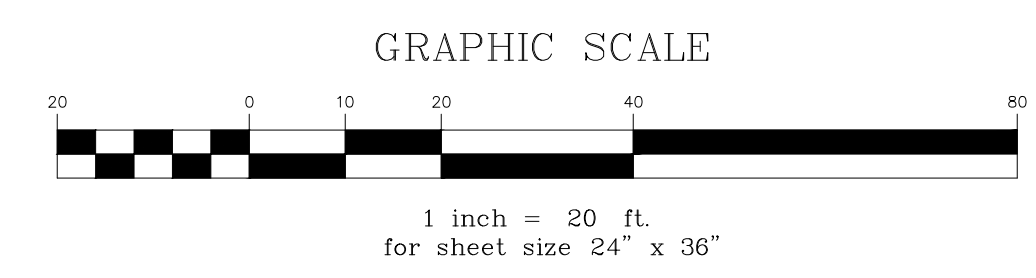
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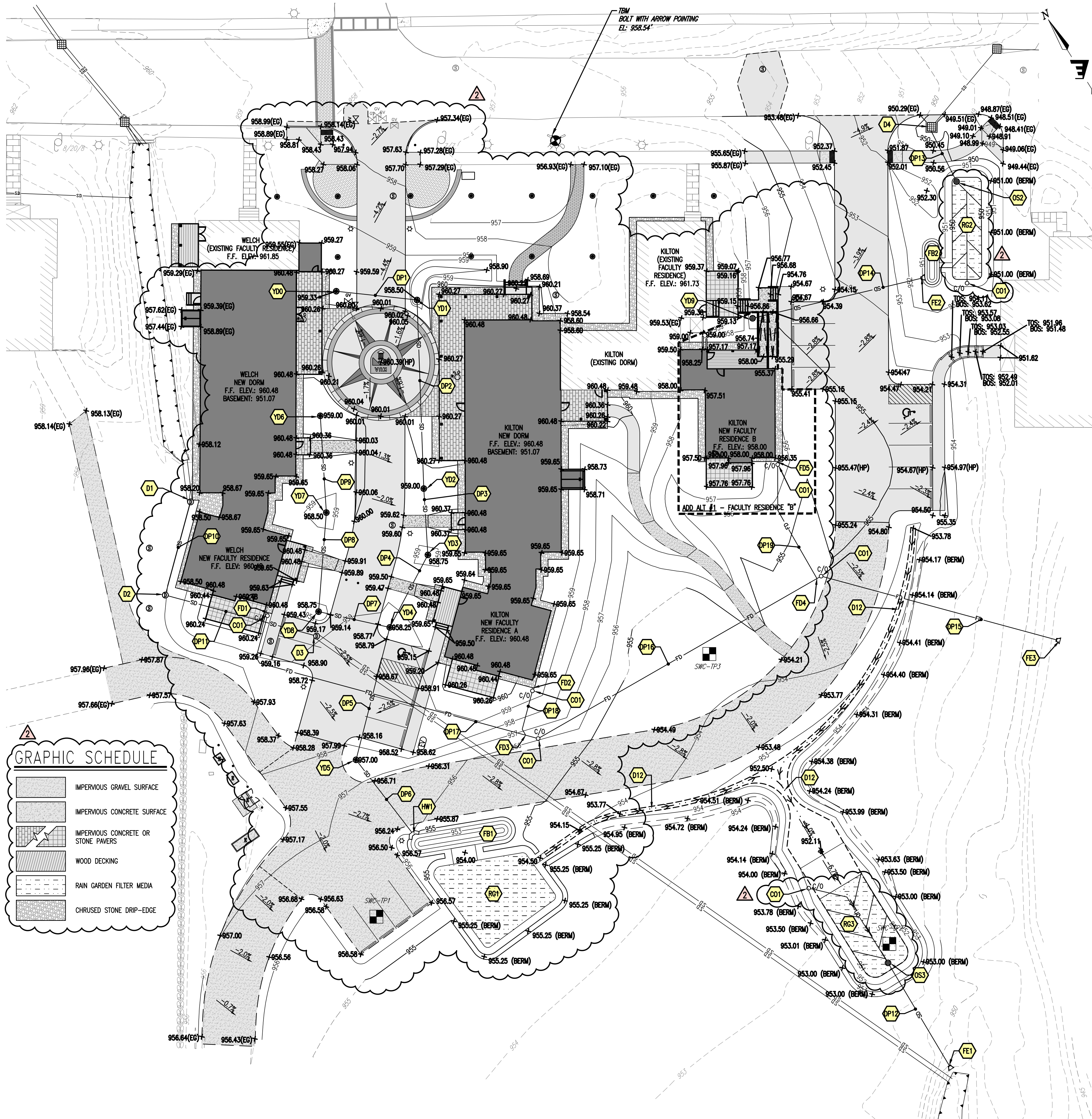
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**SITE PLAN**

**C2.1**





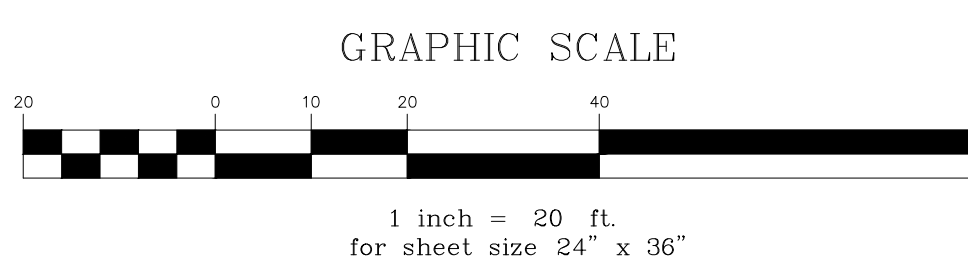


## STORMWATER SCHEDULE

- FOREBAYS**
- FB1 FOREBAY  
BOTTOM: 952.00  
TOP OF BERM: 955.00  
WEIR WIDTH: 10'  
WEIR ELEV.: 954.00
  - FB2 FOREBAY  
BOTTOM: 948.00  
TOP OF BERM: 951.00  
WEIR WIDTH: 2'  
WEIR ELEV.: 950.00
- RAINGARDENS**
- RG1 RAINGARDEN  
FINISHED GRADE: 954.00  
TOP OF MEDIA: 953.75  
BOTTOM OF MEDIA: 951.75  
INFILTRATION ONLY - NO UNDERDRAIN PIPING  
BOTTOM OF UNDERDRAIN GRAVEL: 950.75  
OUTLET WEIR WIDTH: 2'  
OUTLET WEIR ELEV.: 954.50
  - RG2 RAINGARDEN  
FINISHED GRADE: 950.00  
TOP OF MEDIA: 949.75  
BOTTOM OF MEDIA: 947.75  
UNDERDRAIN INV.: 946.75  
BOTTOM OF UNDERDRAIN GRAVEL: 946.75
  - RG3 RAINGARDEN  
BOTTOM: 951.00  
TOP OF MEDIA: 950.75  
BOTTOM OF MEDIA: 948.75  
UNDERDRAIN INV.: 947.75  
BOTTOM OF COARSE GRAVEL: 947.75
- OUTLET STRUCTURES**
- OS1 NOT USED
  - OS2 OUTLET STRUCTURE  
12" DIA. NYLOPLAST, OUTLET RISER  
RIM: 950.50  
INV. IN (6" UNDERDRAIN): 946.75  
(UNDERDRAIN CAPPED WITH 2" DIA. ORIFICE)  
INV. OUT (12" HDPE): 946.75  
SUMP: 944.75
  - OS3 OUTLET STRUCTURE  
12" DIA. NYLOPLAST, OUTLET RISER  
RIM: 952.50  
6" DIA. ORIFICE, INV.: 951.60  
INV. IN (6" UNDERDRAIN): 947.75  
(UNDERDRAIN CAPPED WITH 2" DIA. ORIFICE)  
INV. OUT (12" HDPE): 947.75  
SUMP: 945.75
- DRAINAGE PIPE**
- DP1 34LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP2 78LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP3 27LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP4 34LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP5 56LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP6 39LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP7 30LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP8 41LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP9 40LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP10 40LF, 15" DIA. HDPE PIPE, S=0.0065FT/FT
  - DP11 65LF, 12" DIA. HDPE PIPE, S=0.0065FT/FT
  - DP12 50LF, 12" DIA. HDPE PIPE, S=0.005FT/FT
  - DP13 25LF, 12" DIA. HDPE PIPE, S=0.010FT/FT
  - DP14 ADD ALT #1 - 73LF, 12" DIA. HDPE PIPE, S=0.010FT/FT
  - DP15 102LF, 8" DIA. PVC PIPE, S=0.0049FT/FT
  - DP16 135LF, 8" DIA. PVC PIPE, S=0.0049FT/FT
  - DP17 141LF, 8" DIA. PVC PIPE, S=0.0049FT/FT
  - DP18 21LF, 6" DIA. PVC PIPE, S=0.0416FT/FT
  - DP19 ADD ALT #1 - 53LF, 6" DIA. PVC PIPE, S=0.0293FT/FT
- STRUCTURES**
- D1 4" DIA., PRECAST CONCRETE, CATCH BASIN  
RIM: 957.80  
INV. IN (EXIST.): 954.08  
INV. OUT (15" HDPE): 953.98  
SUMP: 951.98
  - D2 4" DIA., PRECAST CONCRETE, CATCH BASIN  
RIM: 957.63  
INV. IN (15" HDPE): 953.72  
INV. OUT (15" HDPE): 953.62  
SUMP: 951.62
  - D3 4" DIA., PRECAST CONCRETE, CATCH BASIN  
RIM: 958.27  
INV. IN (15" HDPE, NW): 953.20  
INV. OUT (EXIST): 952.35  
SUMP: 950.35
  - D4 EXISTING CATCH BASIN  
ADJUST FRAME AND GRATE, AS NEEDED, TO MATCH FINISHED GRADE OF 949.47  
CORE AND BOOT NEW OPENING FOR 12" RAINGARDEN OUTLET INV.: 946.50
- YARD DRAINS**
- YD0 12" DIA. YARD DRAIN  
RIM: 959.33  
INV. OUT (12" HDPE): 955.34  
SUMP: 953.34
  - YD1 12" DIA. YARD DRAIN  
RIM: 958.50  
INV. IN (12" HDPE): 955.17  
INV. OUT (12" HDPE): 955.17  
SUMP: 953.17
  - YD2 12" DIA. YARD DRAIN  
RIM: 959.00  
INV. IN (12" HDPE): 954.78  
INV. OUT (12" HDPE): 954.78  
SUMP: 952.78
  - YD3 12" DIA. YARD DRAIN  
RIM: 958.75  
INV. IN (12" HDPE): 954.65  
INV. OUT (12" HDPE): 954.65  
SUMP: 952.65
  - YD4 24" DIA. YARD DRAIN  
RIM: 958.25  
INV. IN (12" HDPE): 954.48  
INV. OUT (12" HDPE): 954.48  
SUMP: 952.48
  - YD5 12" DIA. YARD DRAIN  
RIM: 957.00  
INV. IN (12" HDPE): 954.20  
INV. OUT (12" HDPE): 954.20  
SUMP: 952.20
  - YD6 12" DIA. YARD DRAIN  
RIM: 959.00  
INV. OUT (12" HDPE): 955.03  
SUMP: 953.03
  - YD7 12" DIA. YARD DRAIN  
RIM: 958.50  
INV. IN (12" HDPE): 954.83  
INV. OUT (12" HDPE): 954.83  
SUMP: 952.83
  - YD8 12" DIA. YARD DRAIN  
RIM: 958.75  
INV. IN (12" HDPE): 954.63  
INV. OUT (12" HDPE): 954.63  
SUMP: 952.63
  - YD9 ADD ALT #1 - 12" DIA. YARD DRAIN  
RIM: 956.00  
INV. OUT (12" HDPE): 950.81  
SUMP: 948.81
- FOUNDATION DRAINS**
- FD1 PROVIDE BENDS AND FITTINGS AS NEEDED TO THE 6" PVC FOUNDATIONS DRAIN TO 8" DIA. OUTLET PIPE, INV.: 947.86
  - FD2 PROVIDE BENDS AND FITTINGS AS NEEDED TO THE 6" PVC FOUNDATIONS DRAIN TO 6" DIA. OUTLET PIPE, INV.: 948.06
  - FD3 PROVIDE BENDS AND FITTINGS AS NEEDED TO THE 6" PVC OUTLET PIPE TO 8" DIA. OUTLET PIPE, INV.: 947.19
  - FD4 ADD ALT #1 - PROVIDE BENDS AND FITTINGS AS NEEDED TO THE 6" PVC FOUNDATIONS DRAIN TO 6" DIA. OUTLET PIPE, INV.: 946.51
  - FD5 ADD ALT #1 - PROVIDE BENDS AND FITTINGS AS NEEDED TO THE 6" PVC FOUNDATIONS DRAIN TO 6" DIA. OUTLET PIPE, INV.: 948.06
- MISC.**
- SW1 VEGETATED SWALE  
MINIMUM BOTTOM WIDTH: 2'  
SIDE SLOPES: 3:1
  - FE1 12" DIA. HDPE, FLARED END SECTION  
INV.: 947.50
  - FE2 ADD ALT #1 - 12" DIA. HDPE, FLARED END SECTION, INV.: 950.08
  - FE3 8" DIA. HDPE, FLARED END SECTION  
INV.: 946.00
  - HW1 CONCRETE HEADWALL  
TOP WALL: 956.20  
INV.: 954.00
  - CO1 UNDERDRAIN CLEANOUT, TYP.

## GRAPHIC SCHEDULE

- IMPERVIOUS GRAVEL SURFACE
- IMPERVIOUS CONCRETE SURFACE
- IMPERVIOUS CONCRETE OR STONE PAVERS
- WOOD DECKING
- RAIN GARDEN FILTER MEDIA
- CHRUSED STONE DRIP-EDGE



REVISIONS:

#	Date	Description
1	04.12.2023	ADDENDUM #1: BID SET #1
2	05.15.2023	SCOPE CHANGES TO BID SET #1



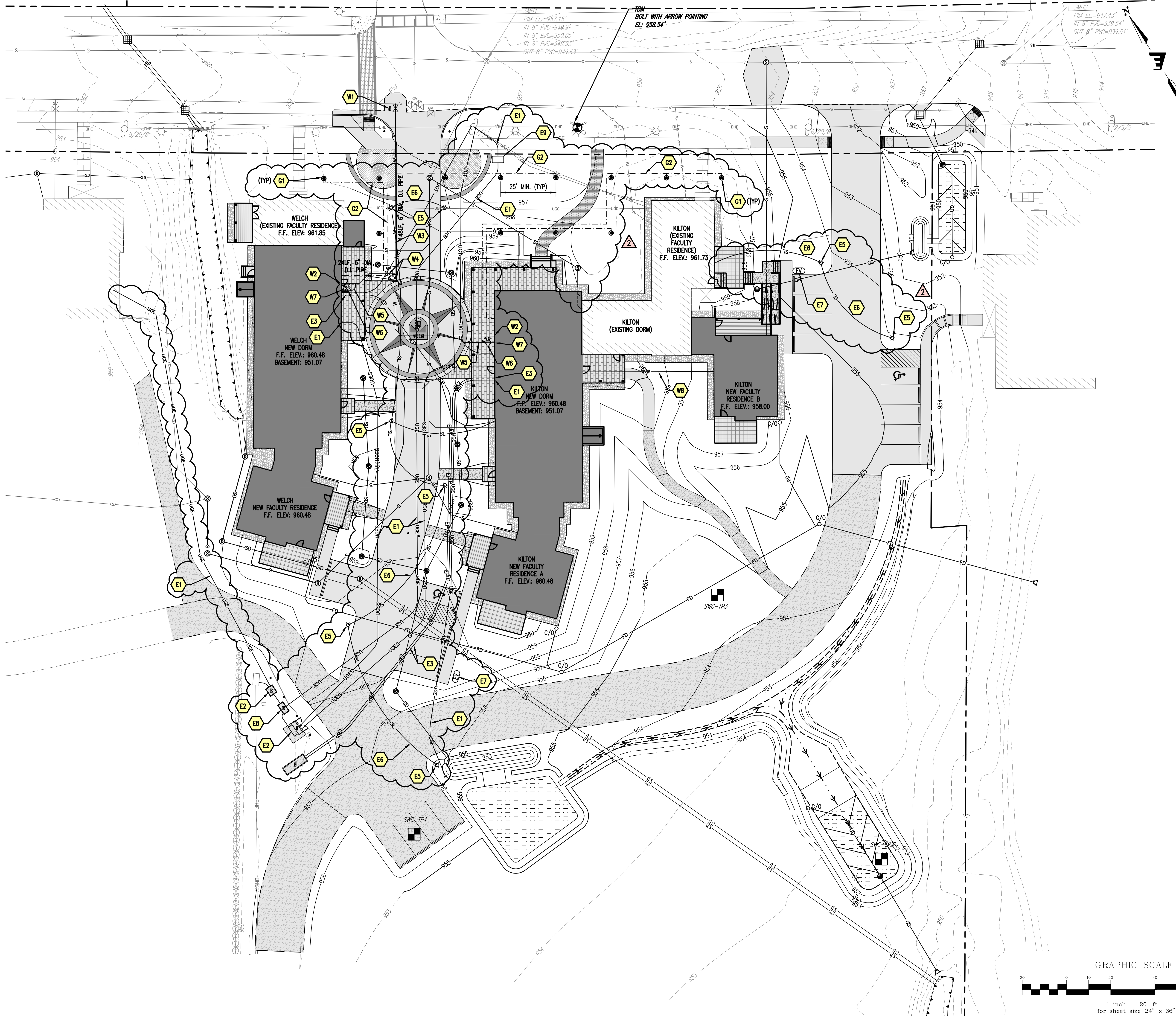
PERMIT SET 05/15/2023

## KUA KILTON/WELCH DORMITORIES

Main Street, Meriden, NH 03770

## GRADING AND DRAINAGE PLAN





**SEWER SCHEDULE**  
REFER TO SEWER PLAN AND PROFILES ON SHEET C3.1

**ELECTRICAL SCHEDULE**

- E1** ELECTRICAL CONDUITS, REFER TO ELECTRICAL PLANS AND DETAILS FOR MATERIAL, SIZE, AND BURIAL REQUIREMENTS
- E2** ELECTRICAL TRANSFORMER WITH CONCRETE PAD AND PROTECTION BOLLARD, REFER TO ELECTRICAL PLANS AND DETAILS
- E3** ELECTRICAL CONDUITS FOR FEEDERS FROM EMERGENCY GENERATOR ALONG WITH START AND ANNUNCIATOR CABLING. REFER TO ELECTRICAL PLANS AND DETAILS FOR MATERIAL, SIZE, AND BURIAL REQUIREMENTS
- E4** EMERGENCY GENERATOR WITH CONCRETE PAD. REFER TO ELECTRICAL PLANS AND DETAILS
- E5** SITE LIGHTING, REFER TO ELECTRICAL PLANS AND DETAILS
- E6** SITE LIGHTING CONDUITS, REFER TO ELECTRICAL PLANS AND DETAILS FOR MATERIAL, SIZE, AND BURIAL REQUIREMENTS
- E7** ELECTRIC VEHICLE CHARGING STATION, REFER TO ELECTRICAL PLANS AND DETAILS
- E8** ELECTRICAL SWITCH MODULE, REFER TO ELECTRICAL PLANS AND DETAILS
- E9** PRIMARY CABLE PULL BOX, REFER TO ELECTRICAL PLANS AND DETAILS

**WATER SCHEDULE**

- W1** LINE SIZE X 6", TAPPING SLEEVE AND VALVE
- W2** 6" DIA. FIRE SUPPRESSION WATER SERVICE ENTRANCE, INV.: 953.67
- W3** 6"x6" D.I. TEE
- W4** 6" GATE VALVE
- W5** 1-1/2", TYPE K, COPPER TUBING - DOMESTIC SERVICE
- W6** 1-1/2" CURB STOP WITH CURB BOX AND STAINLESS STEEL ROD
- W7** 1-1/2", DOMESTIC WATER SERVICE ENTRANCE, INV.: 953.67
- W8** ADD ALT #1 - 3/4", TYPE K, COPPER TUBING - DOMESTIC SERVICE
- W9** ADD ALT #1 - 3/4", DOMESTIC WATER SERVICE ENTRANCE, INV.: 953.67

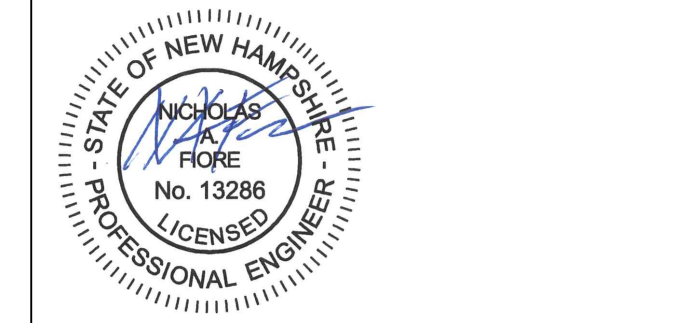
**GEOTHERMAL SCHEDULE**

- GEOTHERMAL WELL LOCATIONS AND PIPING LAYOUTS ARE PRELIMINARY AND SUBJECT TO CHANGE
- G1** GEOTHERMAL WELL LOCATION
  - G2** GEOTHERMAL PIPING

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REVISIONS:

#	Date	Description
1	04.12.2023	ADDENDUM #1: BID SET #1
2	05.15.2023	SCOPE CHANGES TO BID SET #1



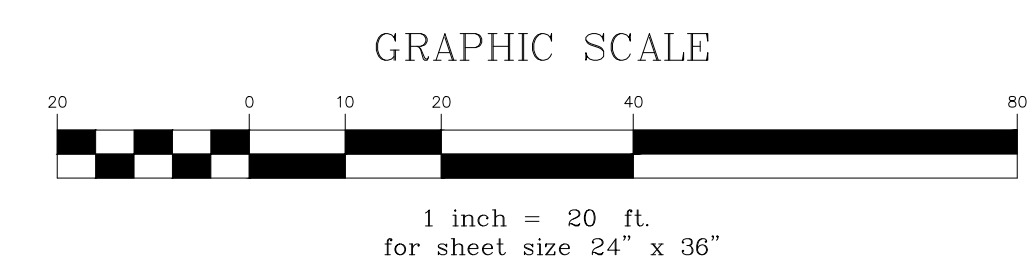
PERMIT SET 05/15/2023

**KUA  
KILTON/WELCH  
DORMITORIES**

Main Street,  
Meriden, NH 03770

UTILITY PLAN

C2.3







### EROSION CONTROL LEGEND

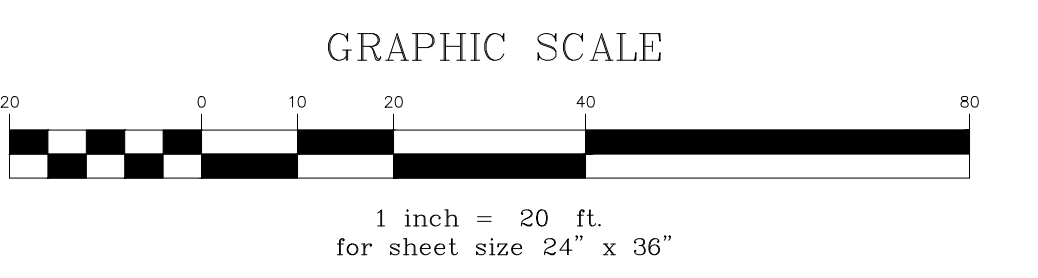
- STONE CHECK DAM**  
THIS STRUCTURAL MEASURE IS ALONG DITCHES/ SWALES AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO SLOW STORMWATER RUNOFF AND TRAP SEDIMENT PARTICLES. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.
- TEMPORARY STABILIZED CONSTRUCTION ENTRANCE**  
THIS STRUCTURAL MEASURE IS A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER FABRIC LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. THIS WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED. ONCE REMOVED, THE IMPACTED AREA SHALL BE SEEDING AND MULCHED.
- TEMPORARY SEDIMENT BASIN**  
THIS STRUCTURAL MEASURE INVOLVES CONSTRUCTING TEMPORARY SEDIMENT BASINS IN THE LOCATION OF PROPOSED STORMWATER PONDS. GENERALLY THE STORMWATER PONDS CAN BE CONSTRUCTED AS SHOWN ON THE PLANS HOWEVER ORIFICE ON THE OUTLET STRUCTURES SHALL BE OMITTED UNTIL THE SITE IS STABILIZED TO IMPOUND RUNOFF AND ALLOW FOR SETTLING OF SUSPENDED FINES. THIS WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED. ONCE THE SITE IS STABILIZED, SEDIMENT SHALL BE REMOVED FROM THE BASINS AND THE OUTLET ORIFICE SHALL BE DRILLED INTO THE OUTLET STRUCTURE AS NOTED ON THE PLANS.
- TEMPORARY STAGING AND WASTE AREAS (APPROXIMATE)**  
THESE ARE APPROVED LOCATIONS WHERE NON-SOIL, NON-ERODIBLE MATERIALS MAY BE STORED. SOILS SHALL NOT BE STORED IN THESE AREAS.
- TEMPORARY SOIL STOCKPILE AREAS (APPROXIMATE)**  
THESE ARE APPROVED LOCATIONS WHERE TOPSOIL AND OTHER SOIL MATERIALS MAY BE STORED. THESE STOCKPILES WILL BE PROTECTED FROM EROSION BY A NUMBER OF METHODS, INCLUDING INSTALLING SILT FENCING AROUND THE DOWN GRADIENT PERIMETER OF THE STOCKPILE AND SEEDING AND MULCHING THE STOCKPILE WHEN NOT IN USE FOR MORE THAN FIVE DAYS.
- TEMPORARY SILT FENCING**  
THIS STRUCTURAL MEASURE IS A TEMPORARY BARRIER OF GEOTEXTILE FABRIC USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOIL. IT IS INSTALLED ALONG THE PERIMETER OF IMPACTED AREAS AND ALONG THE BASE OF THE FILL SLOPES. ADDITIONALLY, WHEN DESIGNATED ALONG THE LIMITS OF DISTURBANCE, INSTALL CONSTRUCTION FENCE BEHIND THE SILT FENCE. SILT FENCING IS EFFECTIVE IN REDUCING STORMWATER RUNOFF VELOCITIES, ASSIST IN THE DEPOSITION OF TRANSPORTED SEDIMENT LOAD AND PREVENT EROSION OF SOILS ONTO ADJACENT AREAS. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.
- LIMITS OF CONSTRUCTION**  
THE CONTRACTOR SHALL CONTAIN ANY EARTH MOVING ACTIVITIES WITHIN THE DESIGNATED LIMITS SHOWN ON THIS PLAN. THE ENGINEER SHALL REVIEW THE SITE TO MAKE ANY ADJUSTMENTS TO ACCOUNT FOR ENVIRONMENTALLY SENSITIVE AREAS, SPECIMEN TREES AND SPECIAL AREAS OF CONCERN.

### CONSTRUCTION SEQUENCE

1. CONTRACTOR TO COORDINATE STOCKPILE AND STAGING AREAS WITH THE OWNER.
2. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL HOST A PRECONSTRUCTION MEETING WITH OWNER, ENGINEER, CITY PLANNING, POLICE, FIRE, AND PUBLIC WORKS STAFF.
3. PRIOR TO ANY OTHER WORK SILT FENCE SHALL BE INSTALLED. SILT FENCE SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES 3 INCHES DEEP. SILT FENCE SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A PROPER SEDIMENT BARRIER.
4. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT.
5. INSTALL INLET PROTECTION ON EXISTING CATCH BASINS AFFECTED DURING CONSTRUCTION.
6. ROUGH GRADE AND STOCKPILE TOPSOIL SURROUNDED BY SILT FENCE.
7. DEMO EXISTING STRUCTURES AS REQUIRED.
8. CLEAR AND GRUB, REMOVE LOOSE PAVING/DEMO PAVING AS REQUIRED AND HAUL OFF SITE USING EXISTING PARKING AREA AS STAGING.
9. GRADE DRIVE ENTRANCE AND EXCAVATE BUILDING FOUNDATIONS.
10. BEGIN VERTICAL CONSTRUCTION OF BUILDING FOUNDATIONS CONCURRENT WITH WATER AND SEWER UTILITIES.
14. INSTALL STORMWATER PIPING AND STRUCTURES
15. EXCAVATE AND PREP FOR RAIN GARDENS; INSTALL PIPING AND APPURTENANCES, APPLY FABRIC AS INDICATED, IMPORT WASHED STONES AND PEA GRAVEL, FILTER MEDIA, COMPLETE RAIN GARDEN CONSTRUCTION
16. BACKFILL AND SUBGRADE PREP FOR NEW PARKING AND SIDEWALK AREAS
17. COMPLETE FINAL GRADING OF SITE. PLACE TOPSOIL AND PERMANENTLY VEGETATE, LANDSCAPE, AND MULCH.
18. INSTALL LIGHT POLES.
19. PAVE BASE COURSE.
20. STABILIZE EXPOSED SLOPES AND SOILS AS SOON AS GRADED, REPAIR AND REESTABLISH ALL DISTURBED VEGETATED/LAWN AREAS, AND MAINTAIN UNTIL ADEQUATELY VEGETATED.
21. PAVE WEARING COURSE.
22. AFTER THE SITE IS APPROVED BY THE ENGINEER AS ADEQUATELY STABILIZED, REMOVE ALL TEMPORARY BMPS.
23. ANTICIPATED FINAL COMPLETION DATE SUMMER/FALL 2024.

### STORMWATER POLLUTION PREVENTION NOTES

- E1** LIMIT OF DISTURBANCE
- E2** PORTABLE SANITATION FACILITIES, TO BE STAKED DOWN AND SECURED
- E3** INLET PROTECTION (TYP.)
- E4** SILT FENCE (TYP.)
- E5** CONCRETE WASHOUT
- E6** STABILIZED CONSTRUCTION ENTRANCE
- E7** CHECK DAM
- E8** SEDIMENT BASIN
- E9** SOIL STOCKPILE
- E10** STAGING AREA
- E11** ADD. ALT #1 - INLET PROTECTION (TYP.)



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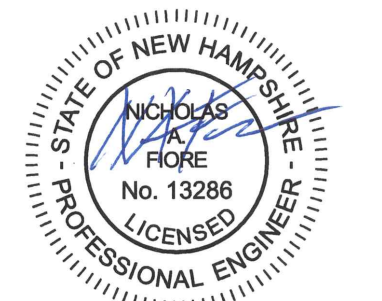
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#	Date	Description
1	04.12.2023	ADDENDUM #1: BID SET #1
2	05.15.2023	SCOPE CHANGES TO BID SET#1



PERMIT SET 05/15/2023

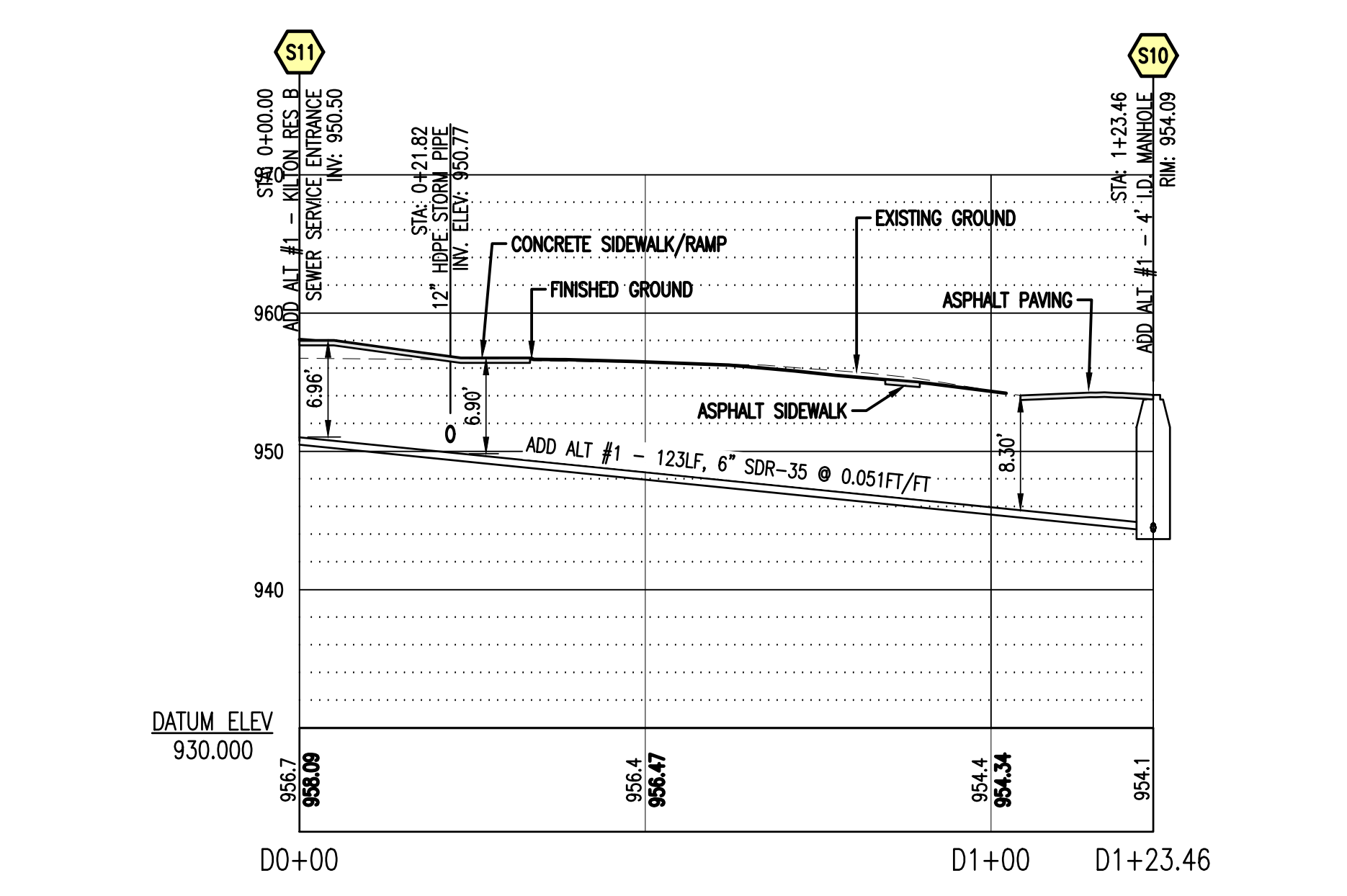
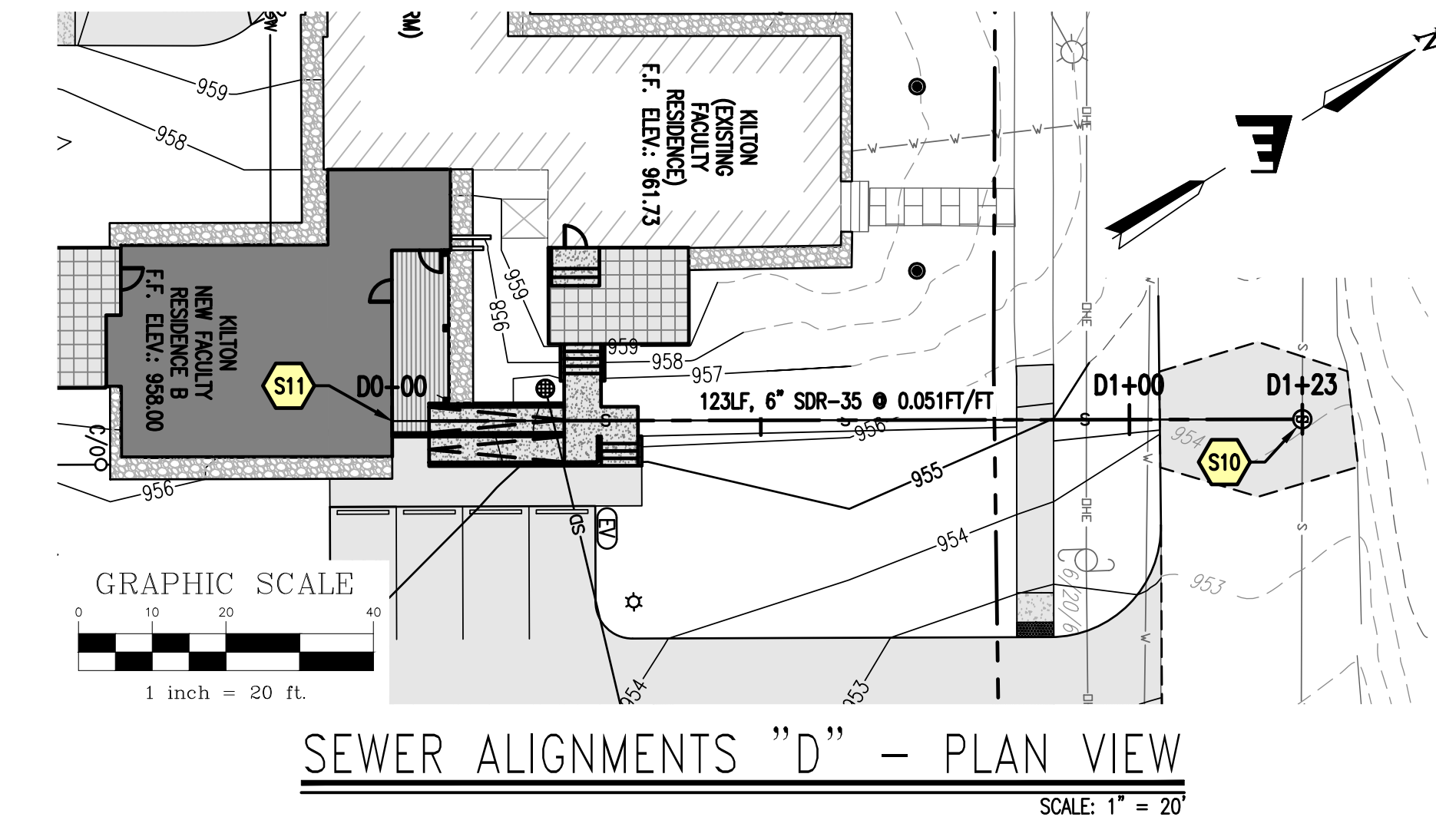
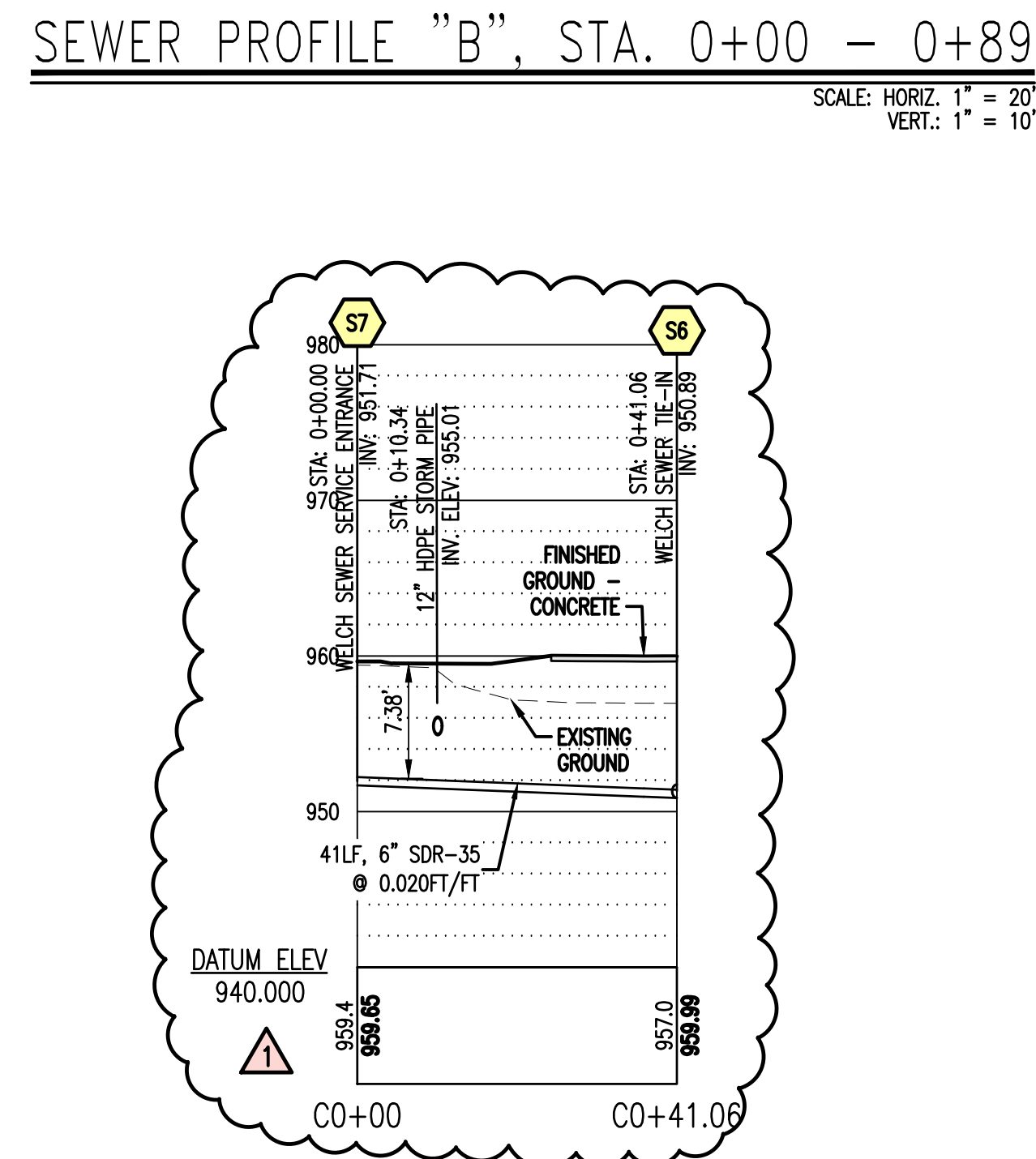
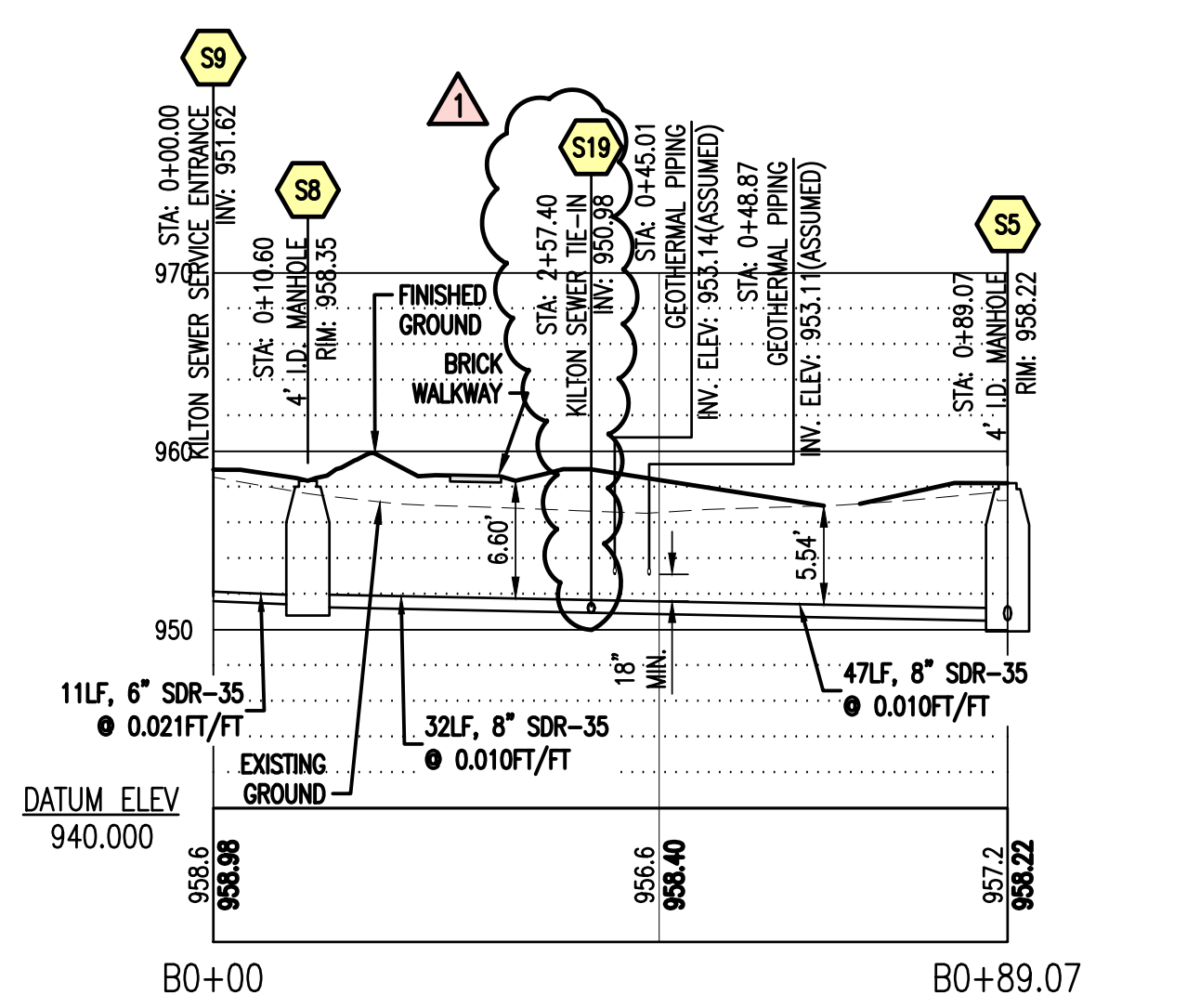
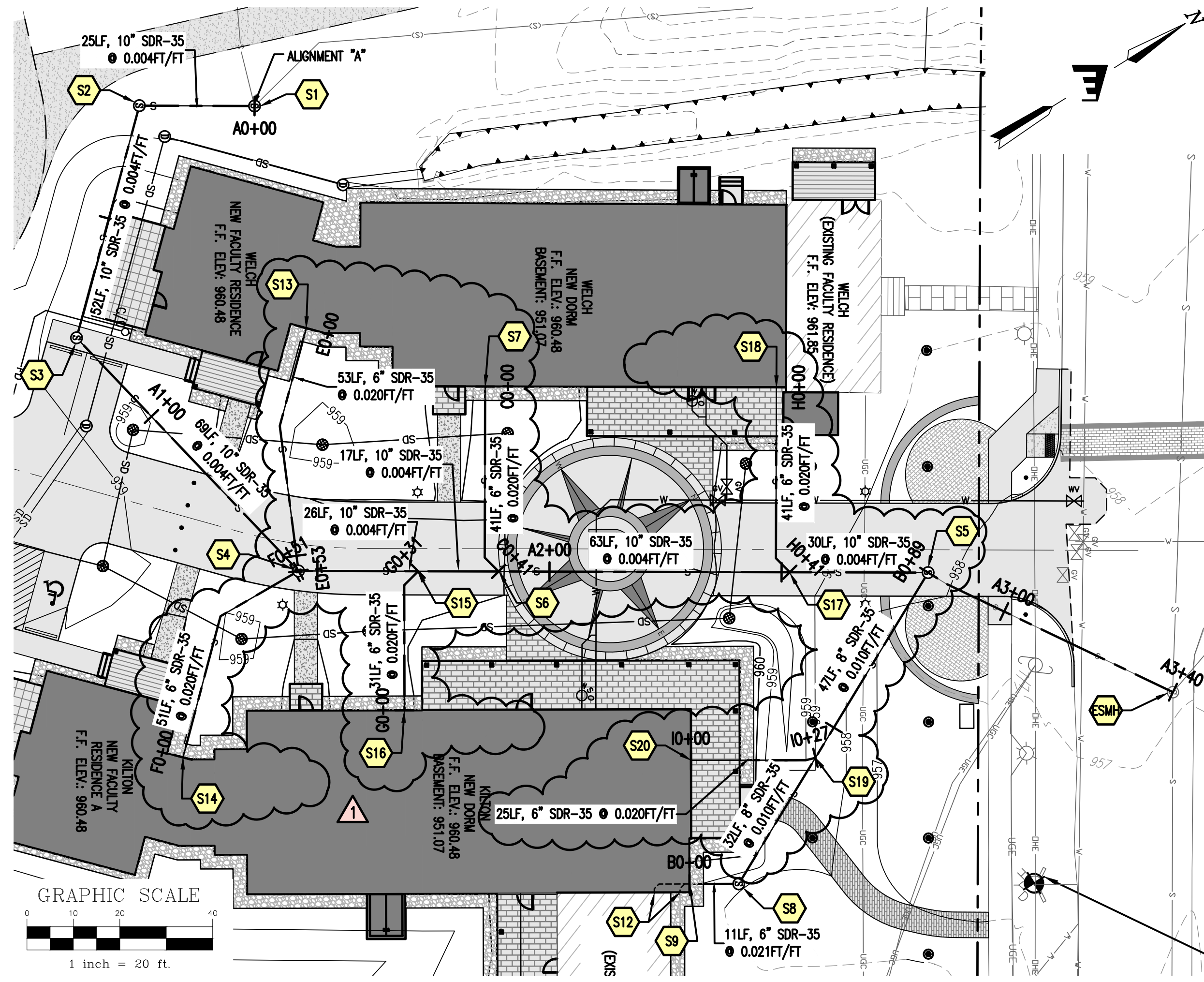
**KUA  
KILTON/WELCH  
DORMITORIES**

Main Street,  
Meriden, NH 03770

**EROSION CONTROL  
PLAN**

**C2.4**





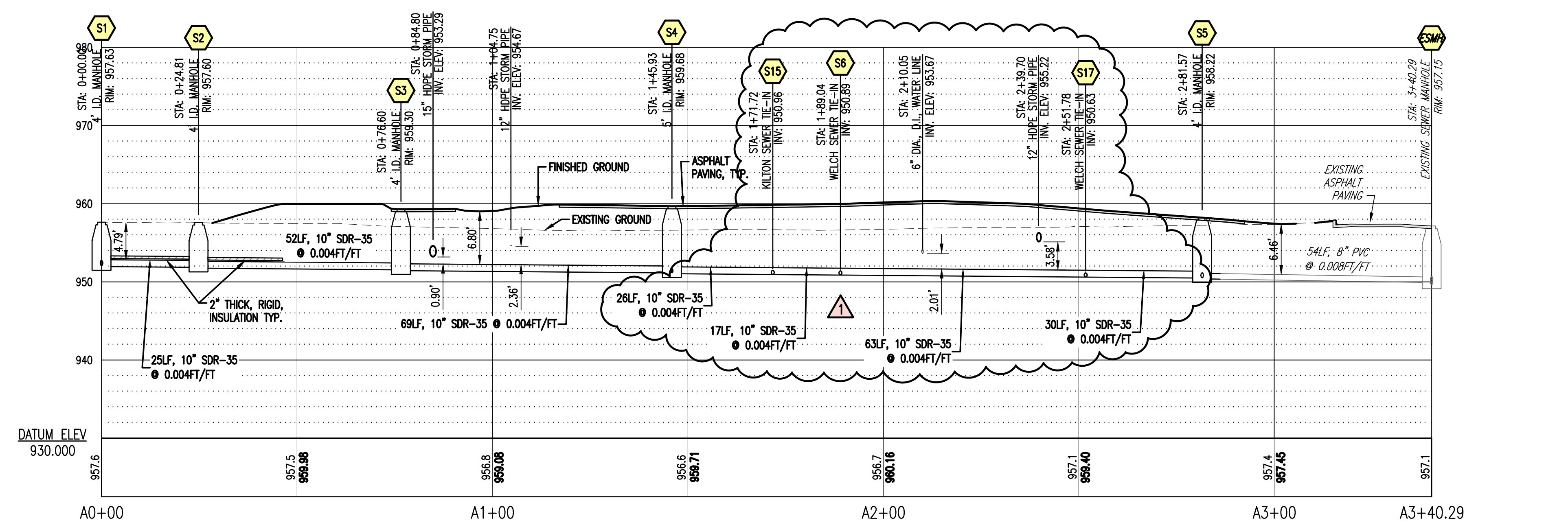
SEWER ALIGNMENTS "A", "B", "C", "E", "F", "G", "H" & "I" - PLAN VIEW

SEWER PROFILE "B", STA. 0+00 - 0+89

SEWER PROFILE "C", STA. 0+00 - 0+41

SEWER ALIGNMENTS "D" - PLAN VIEW

SEWER PROFILE "D", STA. 0+00 - 1+23



SEWER SCHEDULE	
<b>MANHOLES</b>	<b>MISC.</b>
4" L.D. MANHOLE RIM: 957.63 INV. IN: 952.08 (EXISTING 8") INV. OUT: 951.98 (10" SDR-35)	WELCH SEWER TIE-IN INV.: 950.89 (10" SDR-35)
4" L.D. MANHOLE RIM: 957.60 INV. IN: 951.88 (10" SDR-35) INV. OUT: 951.78 (10" SDR-35)	WELCH SEWER SERVICE ENTRANCE INV.: 951.71 (6" SDR-35)
4" L.D. MANHOLE RIM: 959.30 INV. IN: 951.56 (10" SDR-35) INV. OUT: 951.46 (10" SDR-35)	KILTON SEWER SERVICE ENTRANCE INV.: 951.62 (6" SDR-35)
5" L.D. MANHOLE RIM: 959.68 INV. IN: 951.17 (10" SDR-35) INV. IN: 951.17 (6" SDR-35) INV. OUT: 951.07 (10" SDR-35)	<b>ADD ALT #1</b> - KILTON RES B SEWER SERVICE ENTRANCE INV.: 950.50 (6" SDR-35)
4" L.D. MANHOLE RIM: 958.22 INV. IN: 950.51 (10" SDR-35) INV. IN: 950.51 (8" SDR-35) INV. OUT: 950.41 (EXISTING 8" PVC)	INTERCEPT EXISTING KILTON SEWER LINES, REROUTE INTERNALLY AND TIE TO PROPOSED BUILDING SERVICE "S9"
4" L.D. MANHOLE RIM: 958.35 INV. IN: 951.40 (6" SDR-35) INV. OUT: 951.30 (8" SDR-35)	WELCH SEWER SERVICE ENTRANCE INV.: 952.24 (6" SDR-35)
4" L.D. MANHOLE - <b>ADD ALT #1</b> RIM: 954.09 INV. IN: 944.26 (6" SDR-35) INV. IN: 944.16 (EXISTING 8") INV. OUT: 944.16 (EXISTING 8")	KILTON SEWER SERVICE ENTRANCE INV.: 952.19 (6" SDR-35)
	KILTON SEWER TIE-IN INV.: 950.96 (10" SDR-35)
	KILTON SEWER SERVICE ENTRANCE INV.: 951.58 (6" SDR-35)
	WELCH SEWER TIE-IN INV.: 950.63 (10" SDR-35)
	WELCH SEWER SERVICE ENTRANCE INV.: 951.45 (6" SDR-35)
	KILTON SEWER TIE-IN INV.: 950.98 (8" SDR-35)
	KILTON SEWER SERVICE ENTRANCE INV.: 951.52 (6" SDR-35)

SEWER PROFILE "A", STA. 0+00 - 3+40

SEWER SCHEDULE



PERMIT SET 05/15/2023

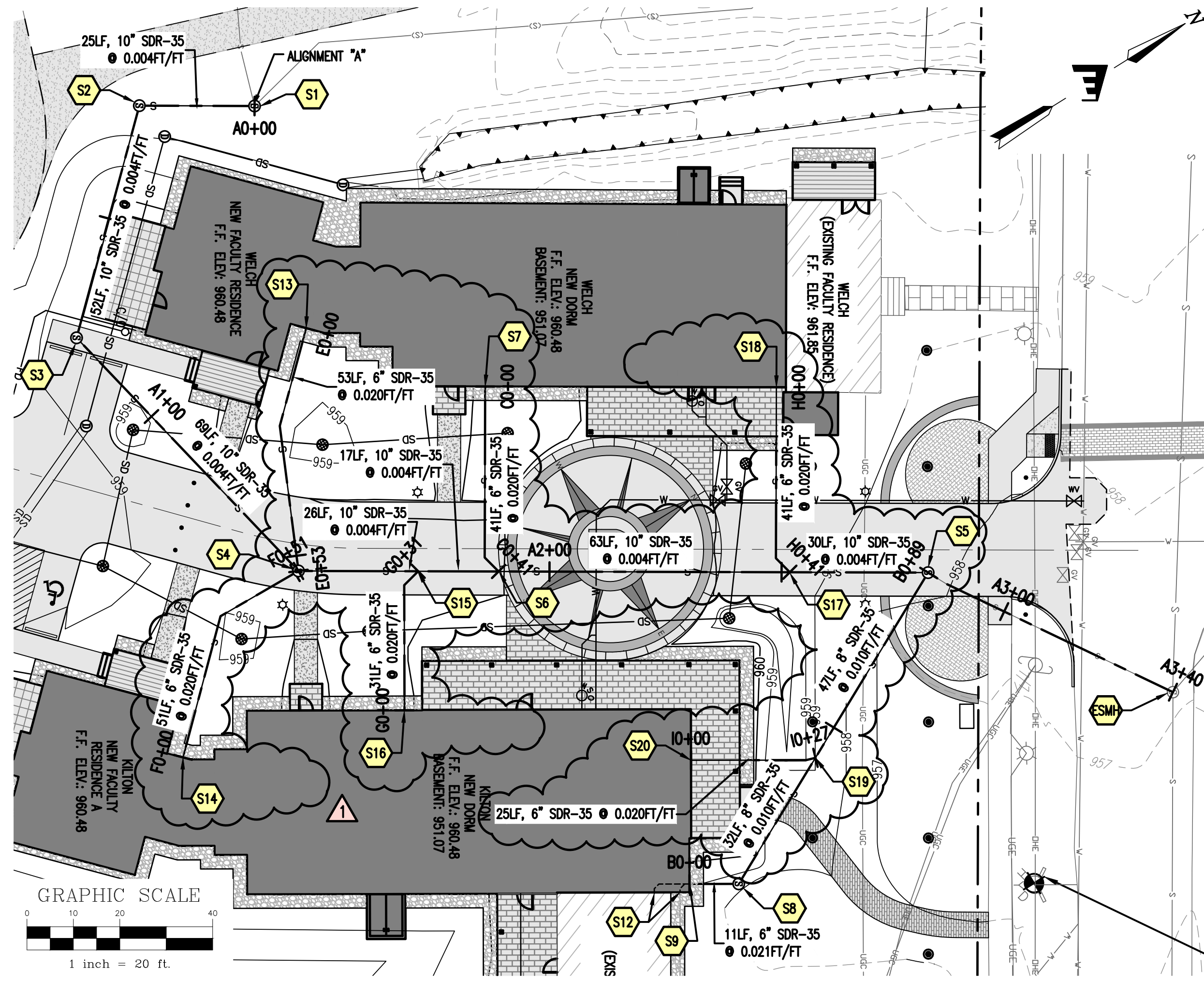
**KUA**  
KILTON/WELCH  
DORMITORIES

Main Street,  
Meriden, NH 03770

SEWER PLAN  
AND PROFILES 1

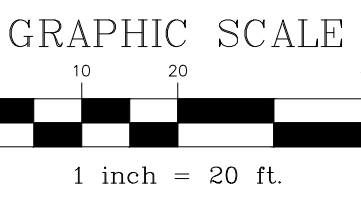
C3.1





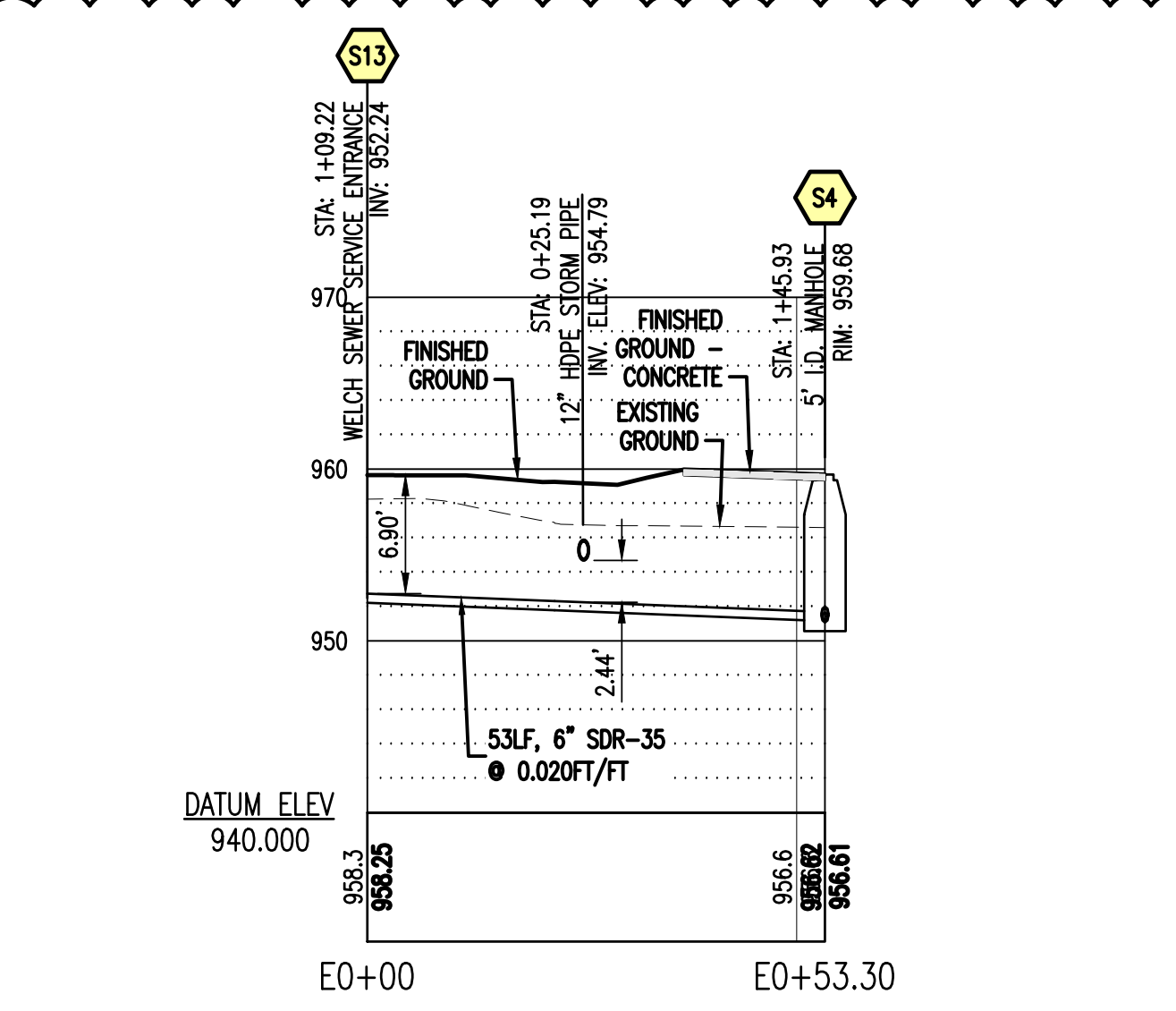
SEWER ALIGNMENTS "A", "B", "C", "E", "F", "G", "H" & "I" - PLAN VIEW

SCALE: HORIZ. 1" = 40'  
VERT.: 1" = 10'



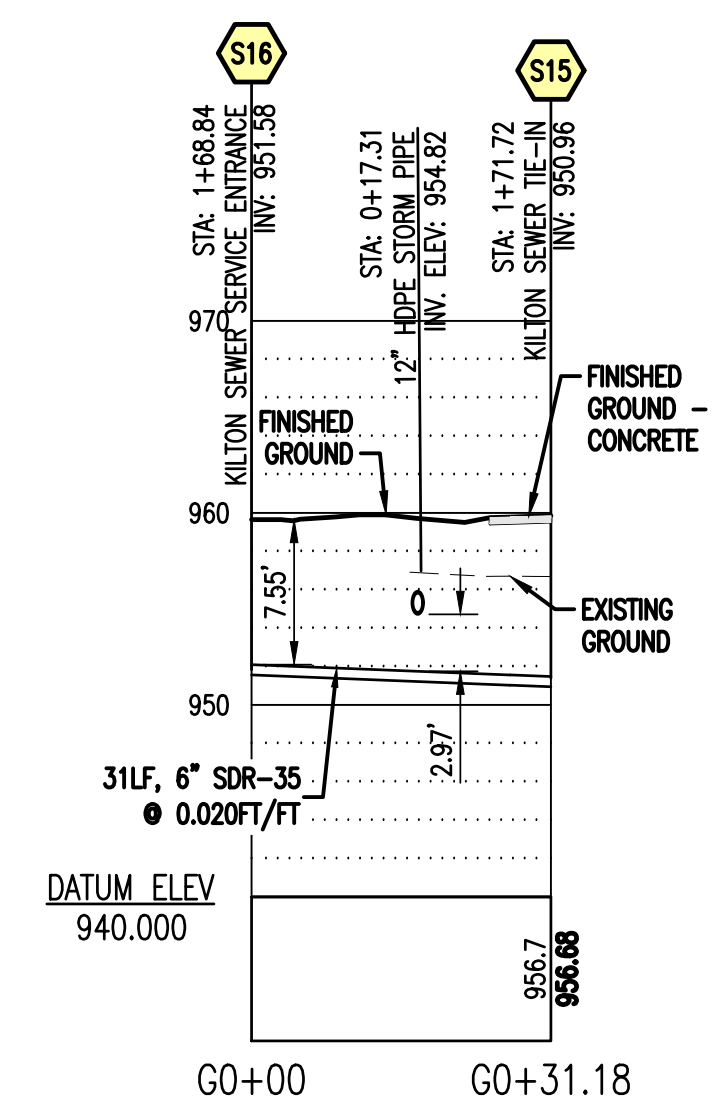
**SEWER SCHEDULE**

MANHOLES	MISC.
4" I.D. MANHOLE RIM: 957.63 INV. IN: 952.08 (EXISTING 8") INV. IN: 952.08 (EXISTING 8") INV. OUT: 951.98 (10" SDR-35)	WELCH SEWER TIE-IN INV.: 950.89 (10" SDR-35)
4" I.D. MANHOLE RIM: 957.60 INV. IN: 951.88 (10" SDR-35) INV. OUT: 951.78 (10" SDR-35)	WELCH SEWER SERVICE ENTRANCE INV.: 951.71 (6" SDR-35)
4" I.D. MANHOLE RIM: 959.30 INV. IN: 951.56 (10" SDR-35) INV. OUT: 951.46 (10" SDR-35)	KILTON SEWER SERVICE ENTRANCE INV.: 951.62 (6" SDR-35)
5" I.D. MANHOLE RIM: 958.68 INV. IN: 951.17 (10" SDR-35) INV. IN: 951.17 (6" SDR-35) INV. IN: 951.17 (6" SDR-35) INV. OUT: 951.07 (10" SDR-35)	<b>ADD ALT #1</b> - KILTON RES B SEWER SERVICE ENTRANCE INV.: 950.50 (6" SDR-35)
4" I.D. MANHOLE RIM: 958.22 INV. IN: 950.51 (10" SDR-35) INV. IN: 950.51 (8" SDR-35) INV. OUT: 950.41 (EXISTING 8" PVC)	<b>S12</b> INTERCEPT EXISTING KILTON SEWER LINES, REROUTE INTERNALLY AND TIE TO PROPOSED BUILDING SERVICE "S9"
4" I.D. MANHOLE RIM: 958.35 INV. IN: 951.40 (6" SDR-35) INV. OUT: 951.30 (8" SDR-35)	WELCH SEWER SERVICE ENTRANCE INV.: 952.24 (6" SDR-35)
4" I.D. MANHOLE - <b>ADD ALT #1</b> RIM: 954.09 INV. IN: 944.26 (6" SDR-35) INV. IN: 944.16 (EXISTING 8") INV. OUT: 944.16 (EXISTING 8")	KILTON SEWER SERVICE ENTRANCE INV.: 952.19 (6" SDR-35)
	KILTON SEWER TIE-IN INV.: 950.96 (10" SDR-35)
	KILTON SEWER SERVICE ENTRANCE INV.: 951.58 (6" SDR-35)
	WELCH SEWER TIE-IN INV.: 950.63 (10" SDR-35)
	WELCH SEWER SERVICE ENTRANCE INV.: 951.45 (6" SDR-35)
	KILTON SEWER TIE-IN INV.: 950.98 (8" SDR-35)
	KILTON SEWER SERVICE ENTRANCE INV.: 951.52 (6" SDR-35)



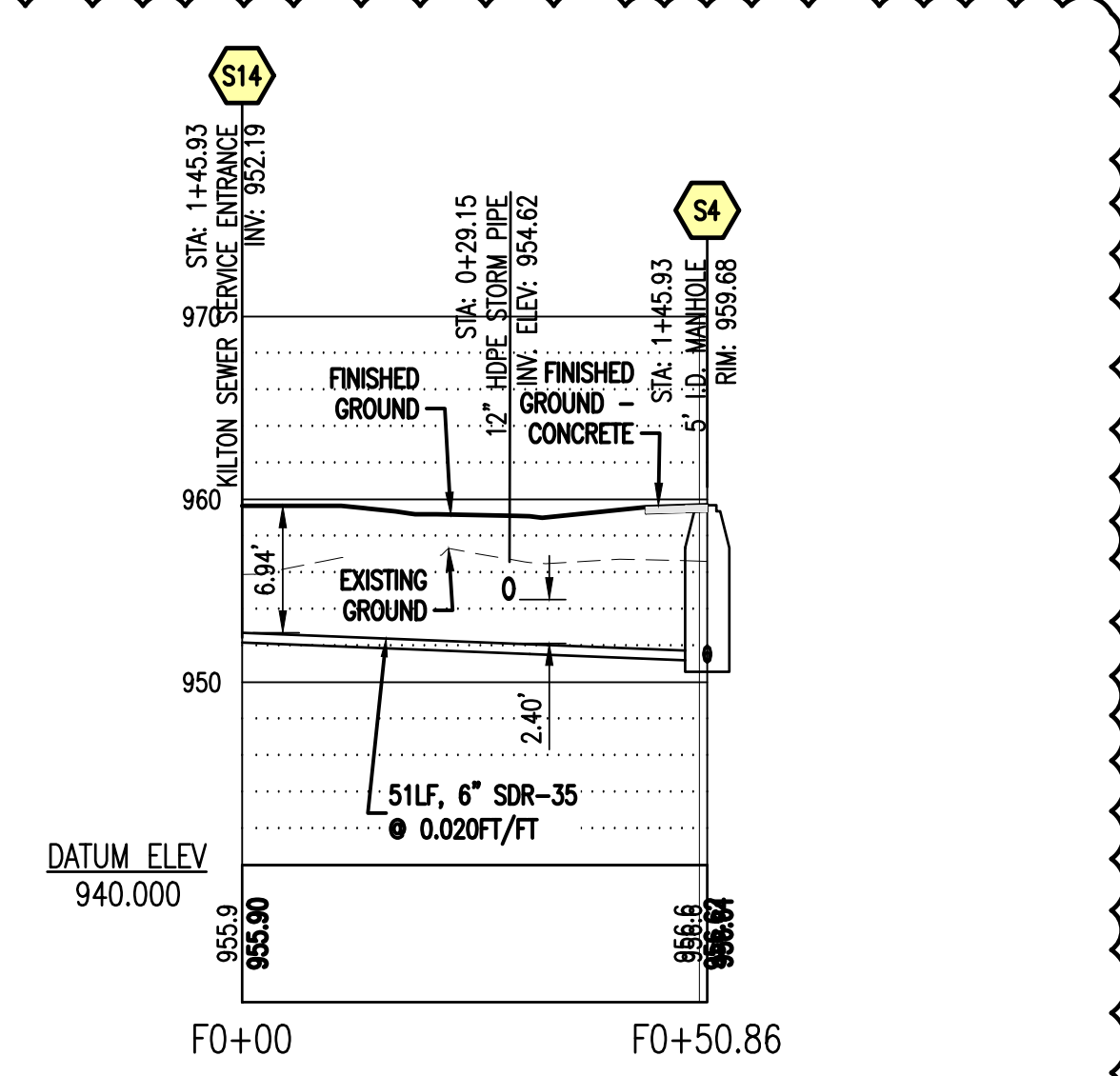
SEWER PROFILE "E", STA. 0+00 - 0+53

SCALE: HORIZ. 1" = 20'  
VERT.: 1" = 10'



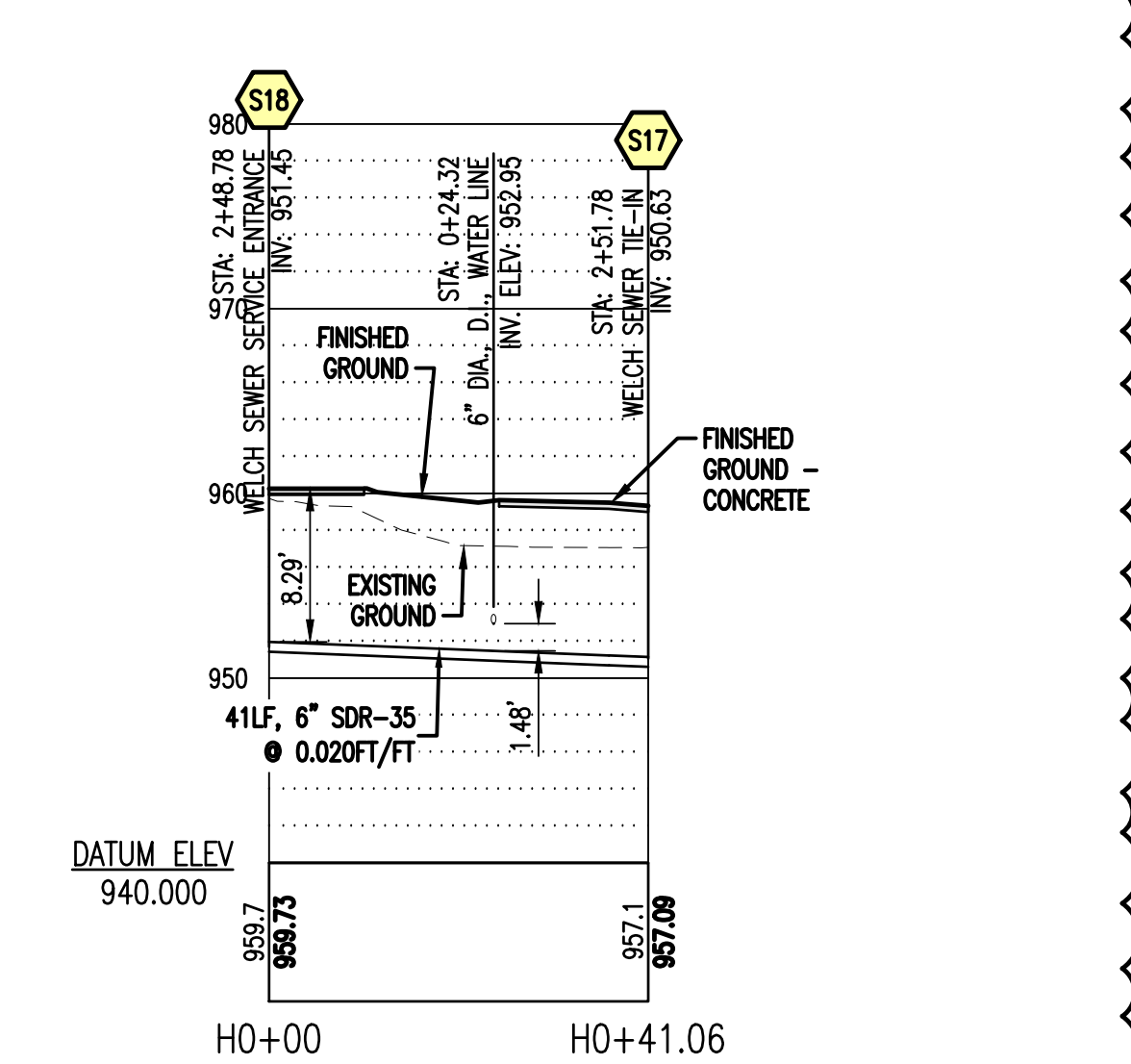
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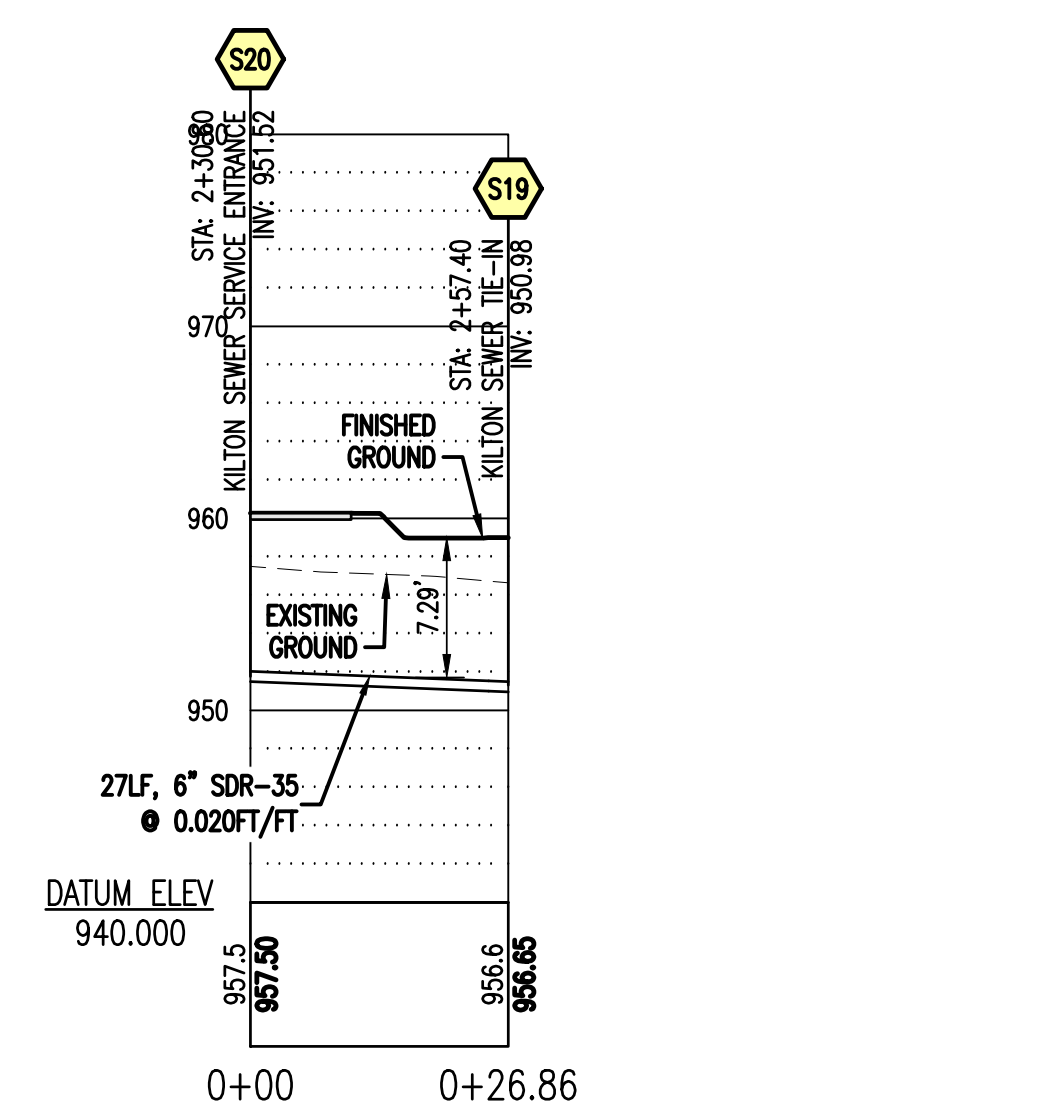
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SEWER PROFILE "H", STA. 0+00 - 0+41

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VERT.: 1" = 10'



SEWER PROFILE "I", STA. 0+00 - 0+27

SCALE: HORIZ. 1" = 20'  
VERT.: 1" = 10'



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Drawn: JWJ  
Checked: NAF

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#	Date	Description
1	05.15.2023	SCOPE CHANGES TO BID SET#1



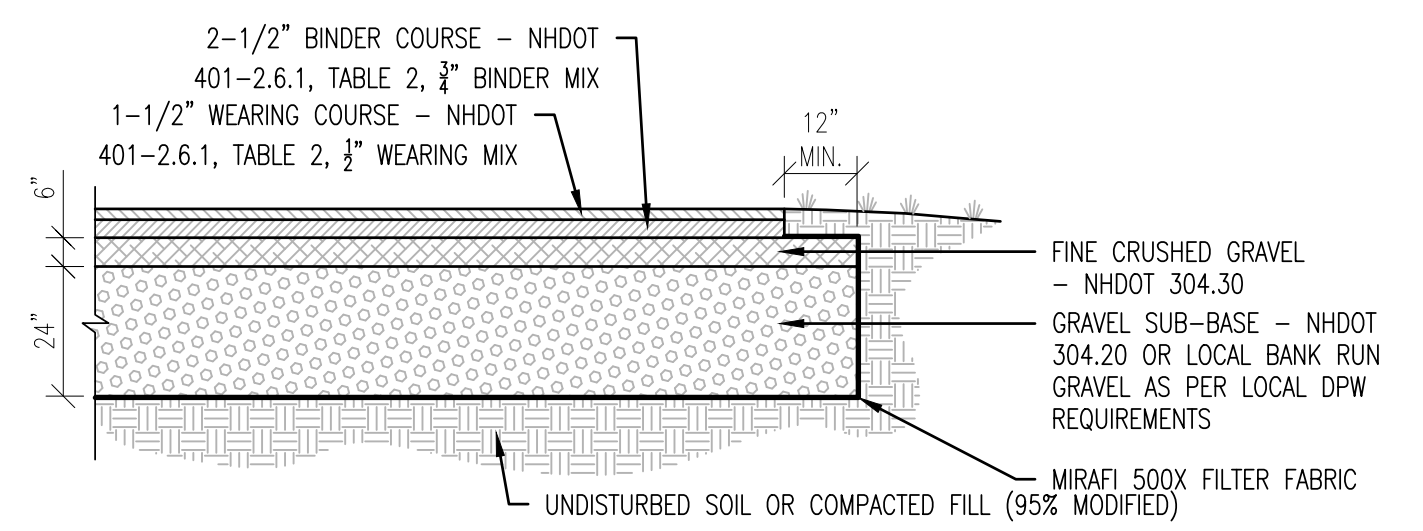
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Meriden, NH 03770

SEWER PLAN  
AND PROFILES 2

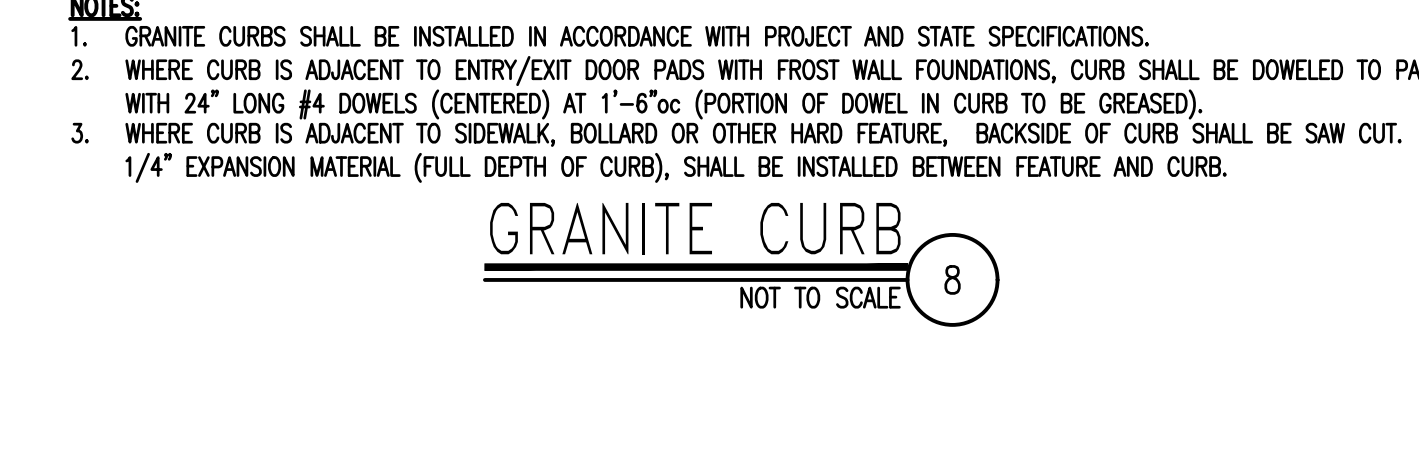
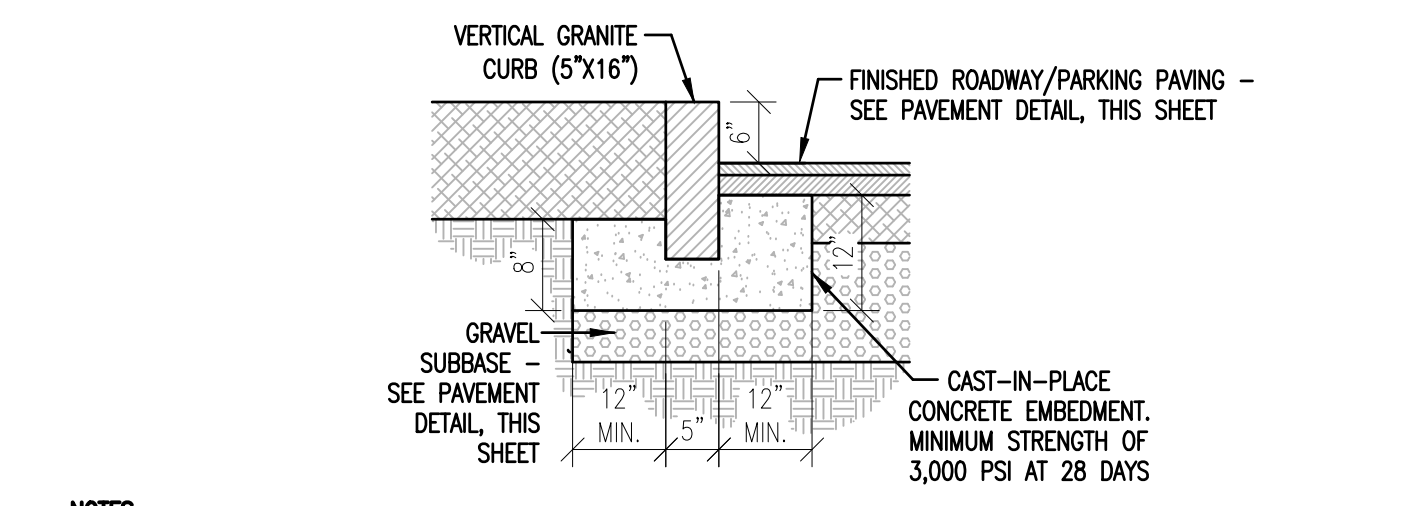
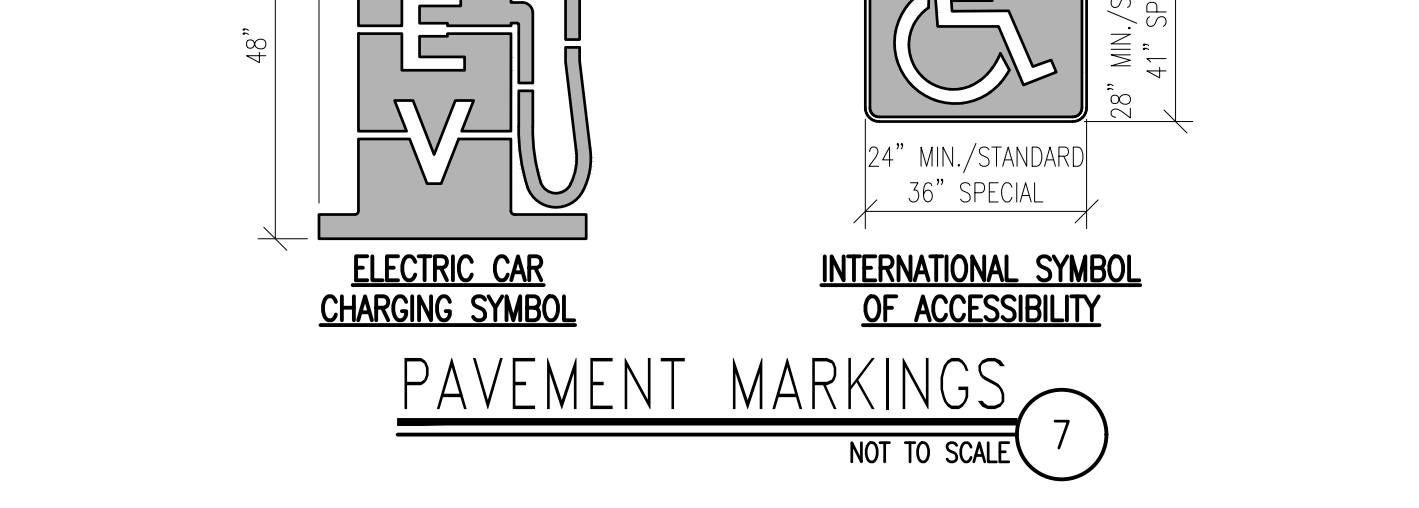
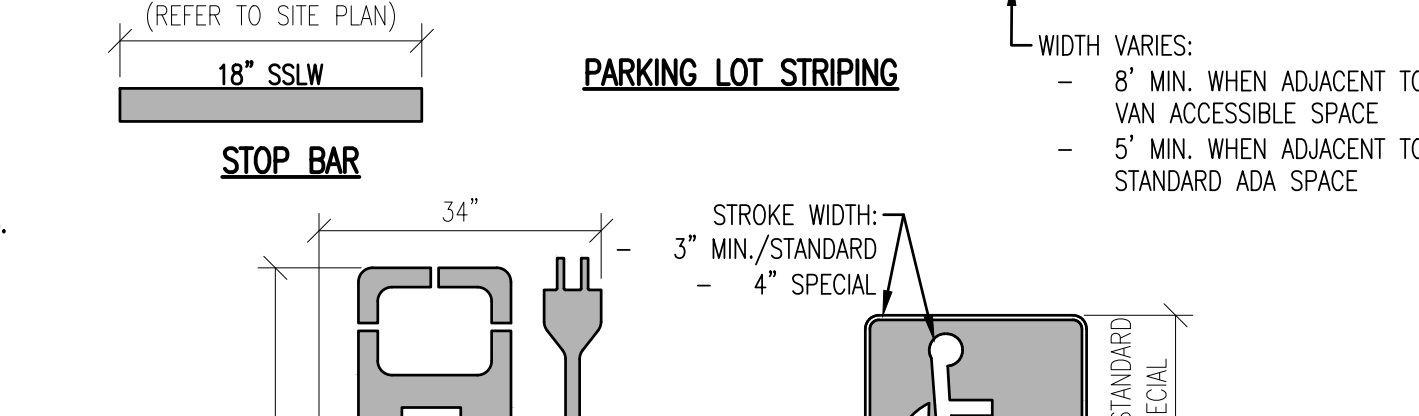
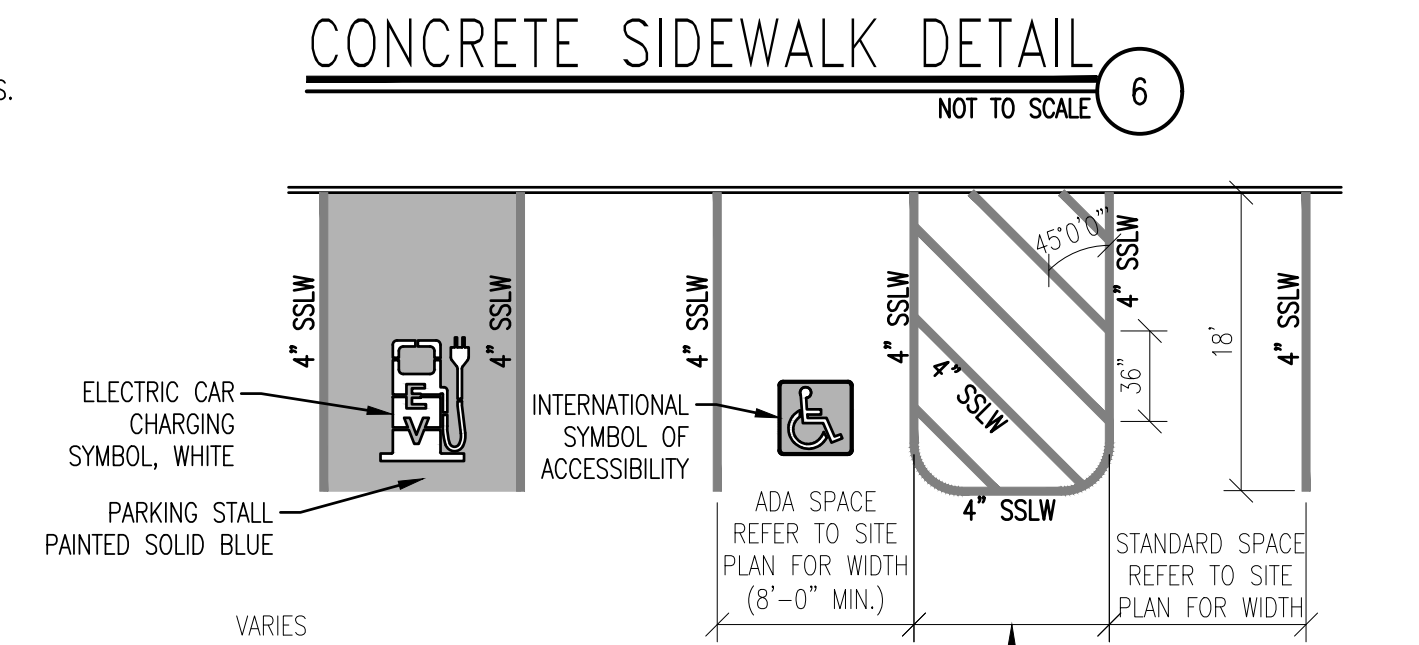
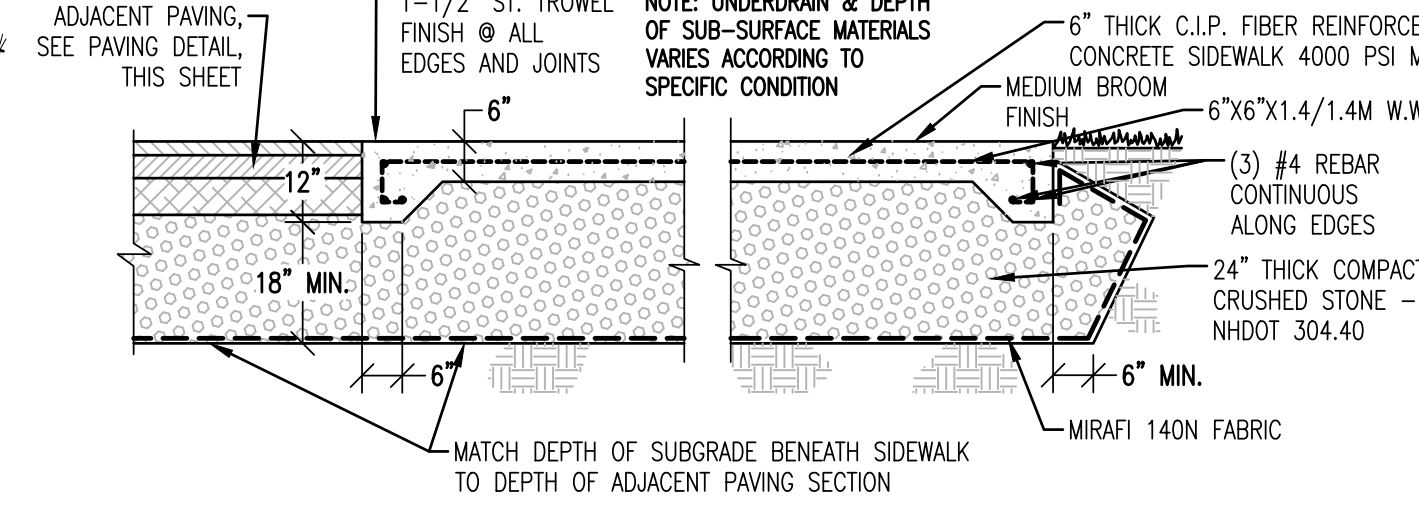
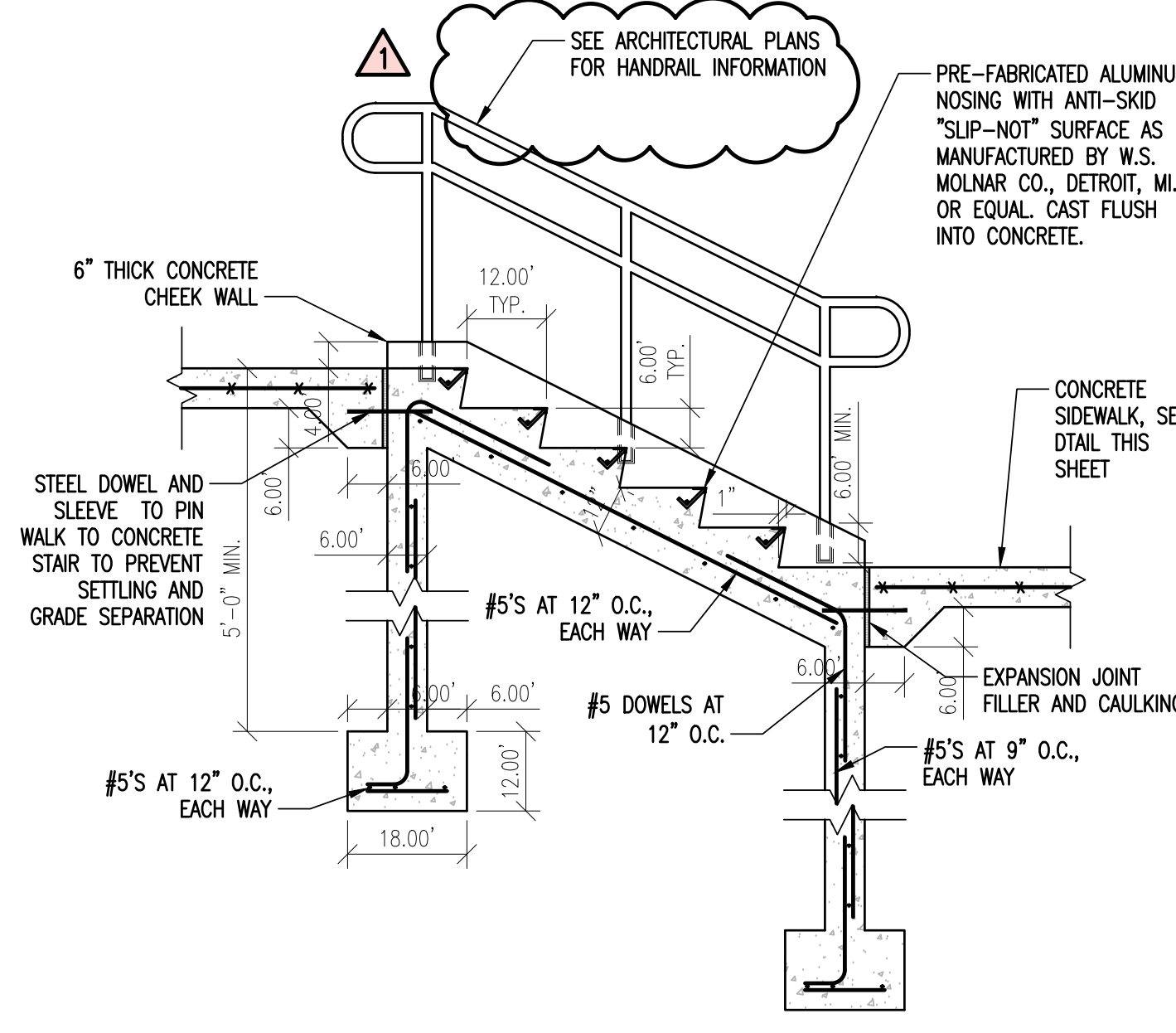
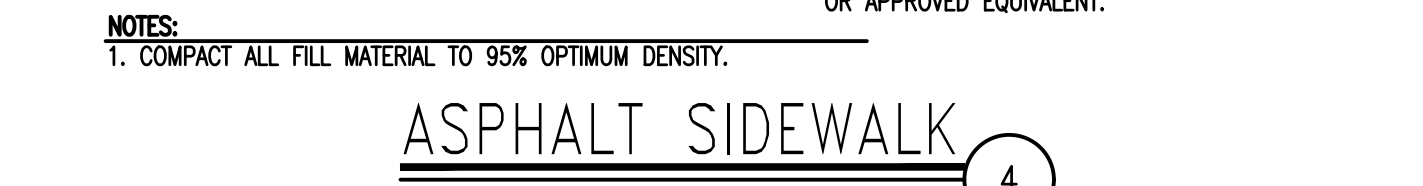
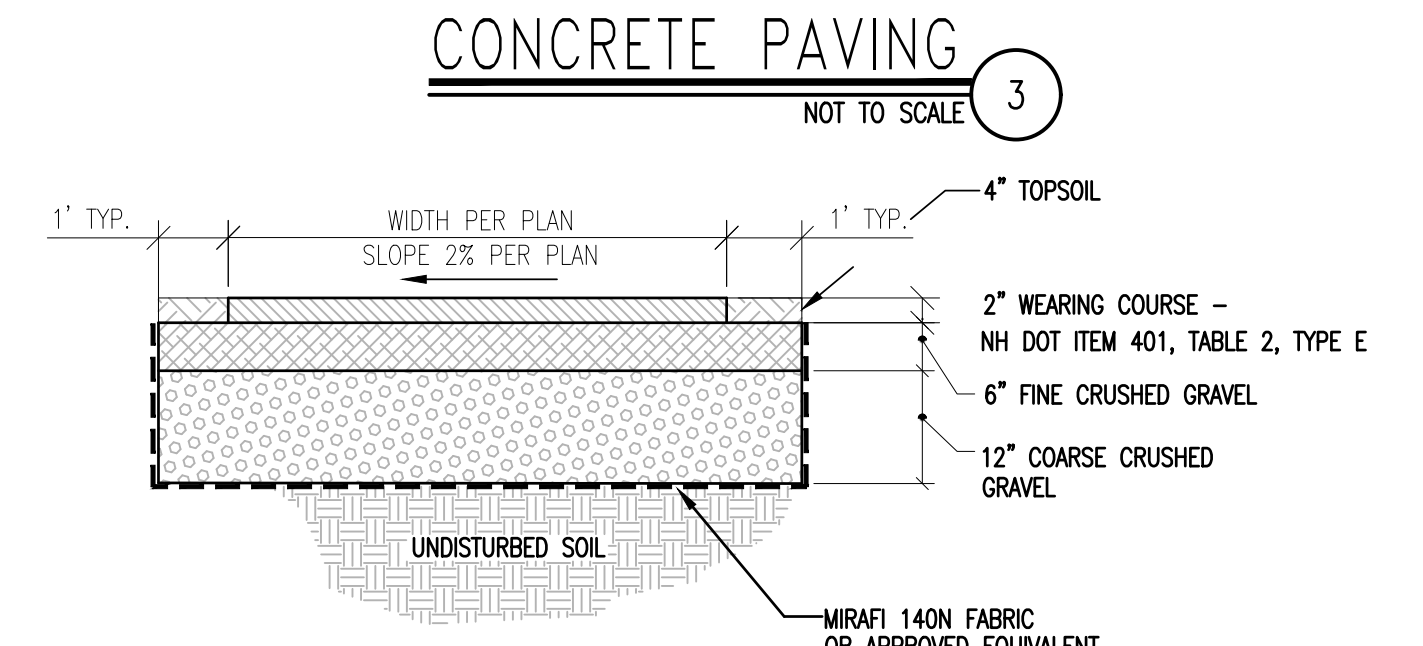
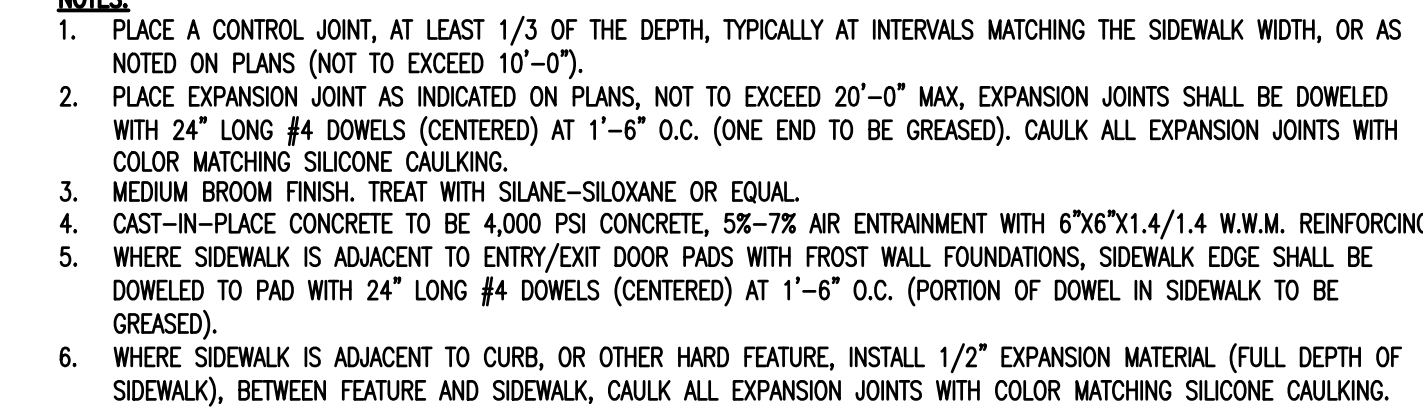
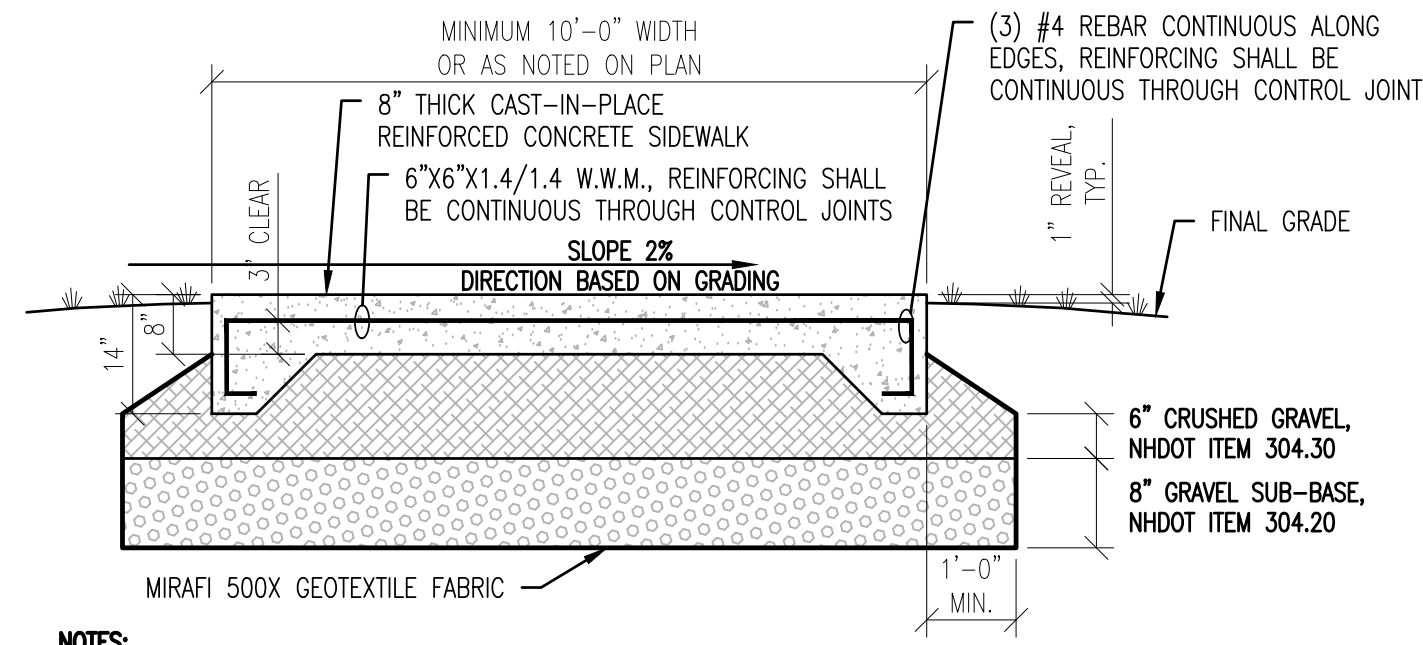
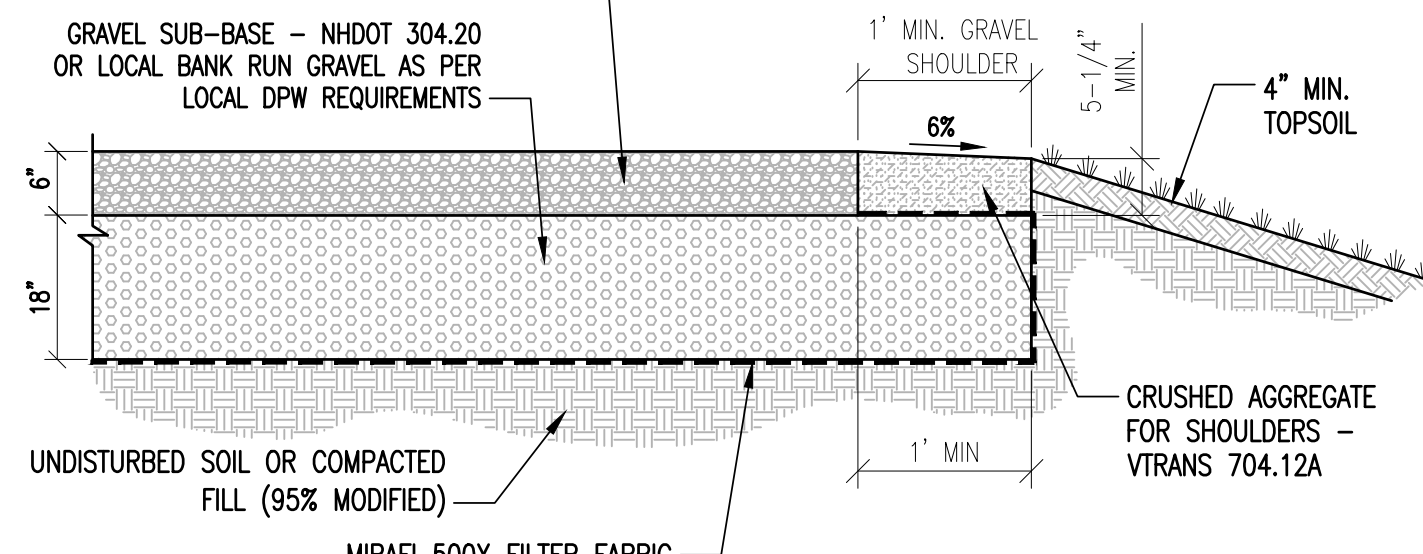
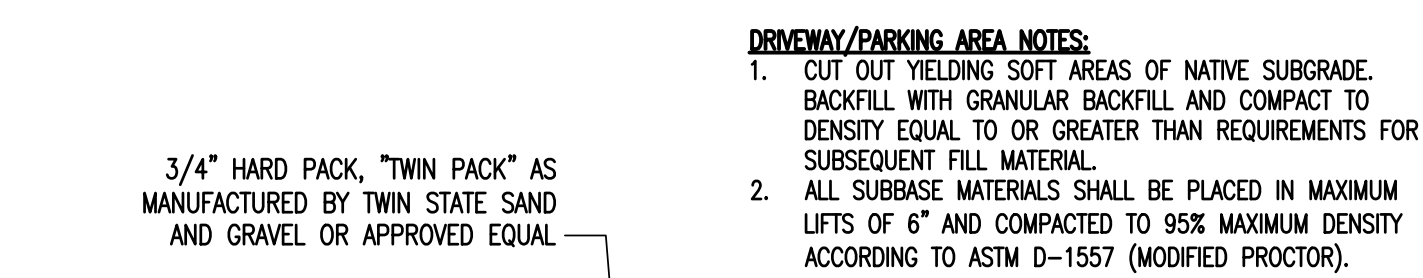
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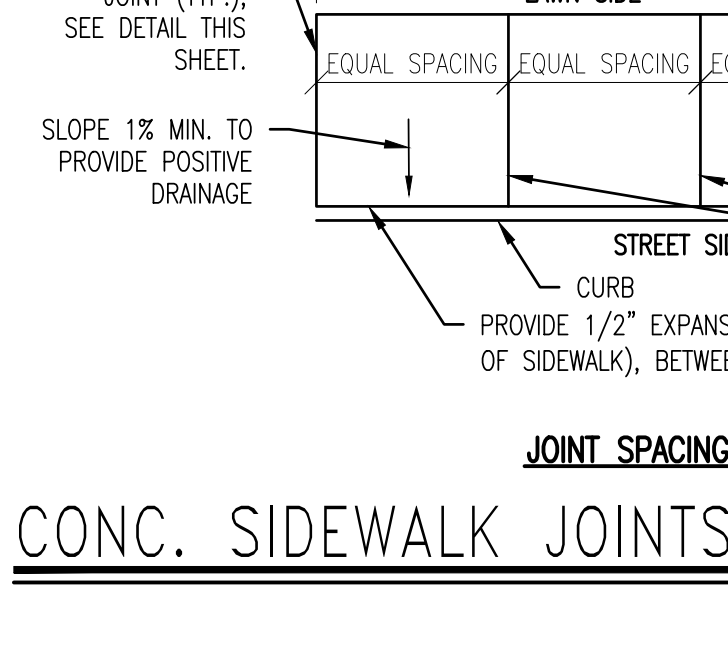
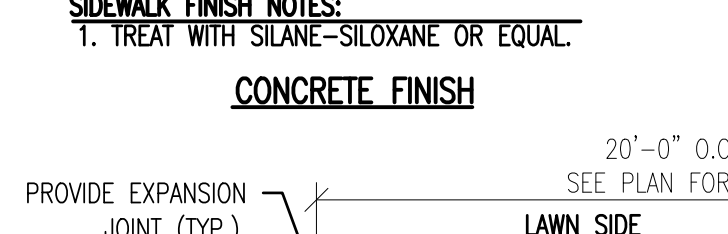
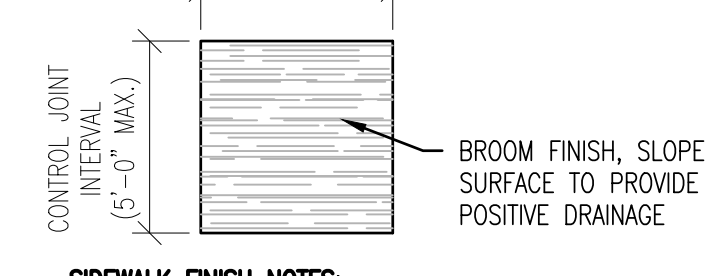


- NOTES:**
- ALL SUBBASE MATERIALS SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR).
  - ROAD/PARKING LOT PAVEMENT CROSS SECTION BASED ON VTRANS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ITEM 401, TABLE 2.

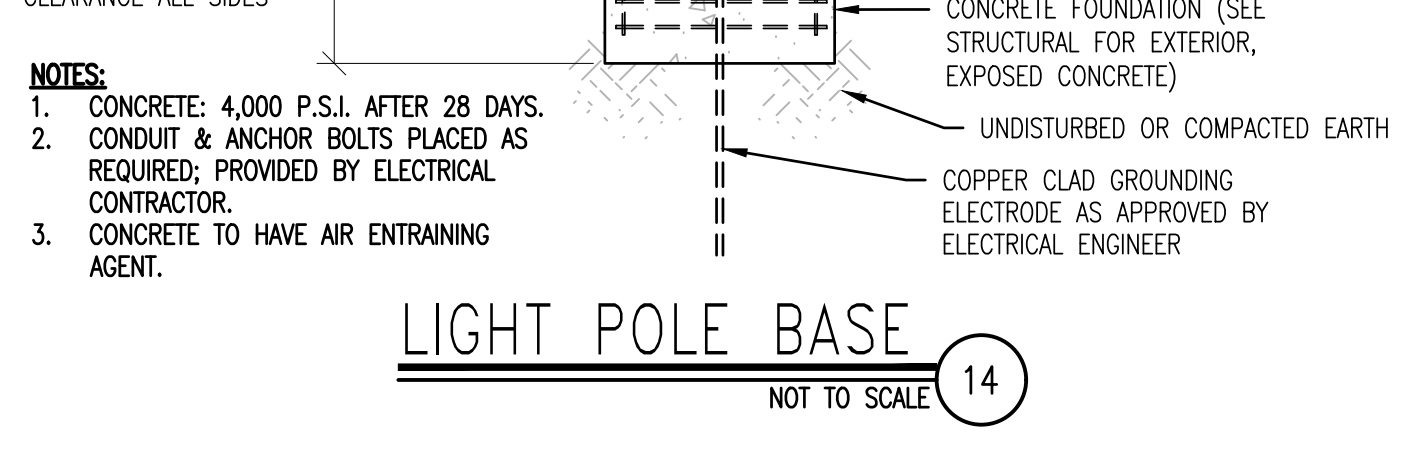
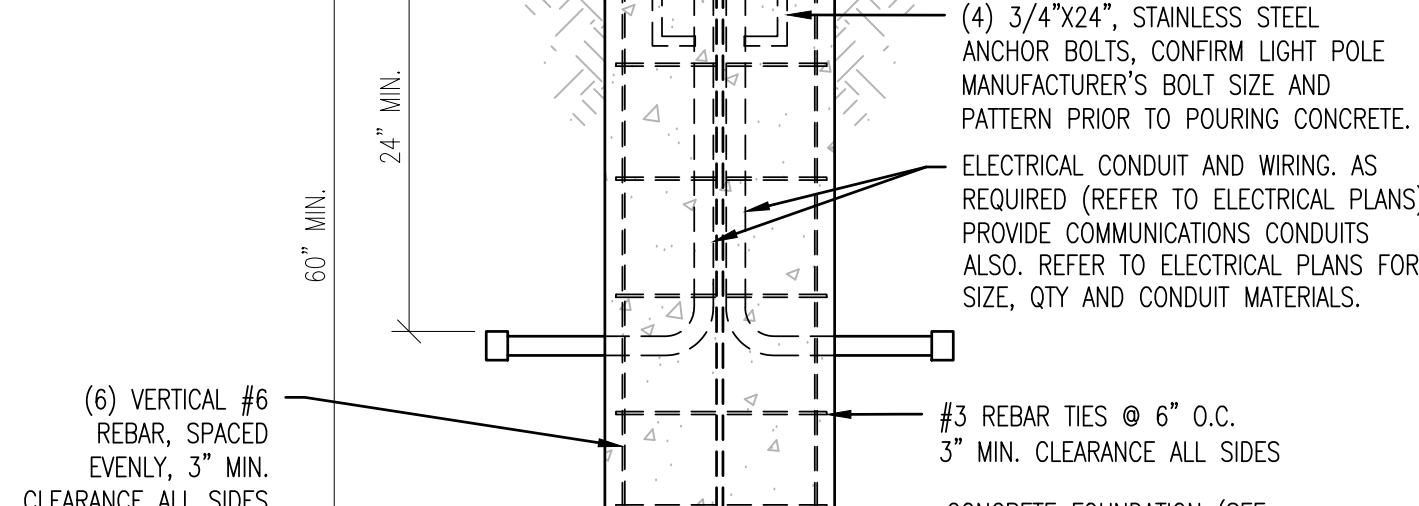
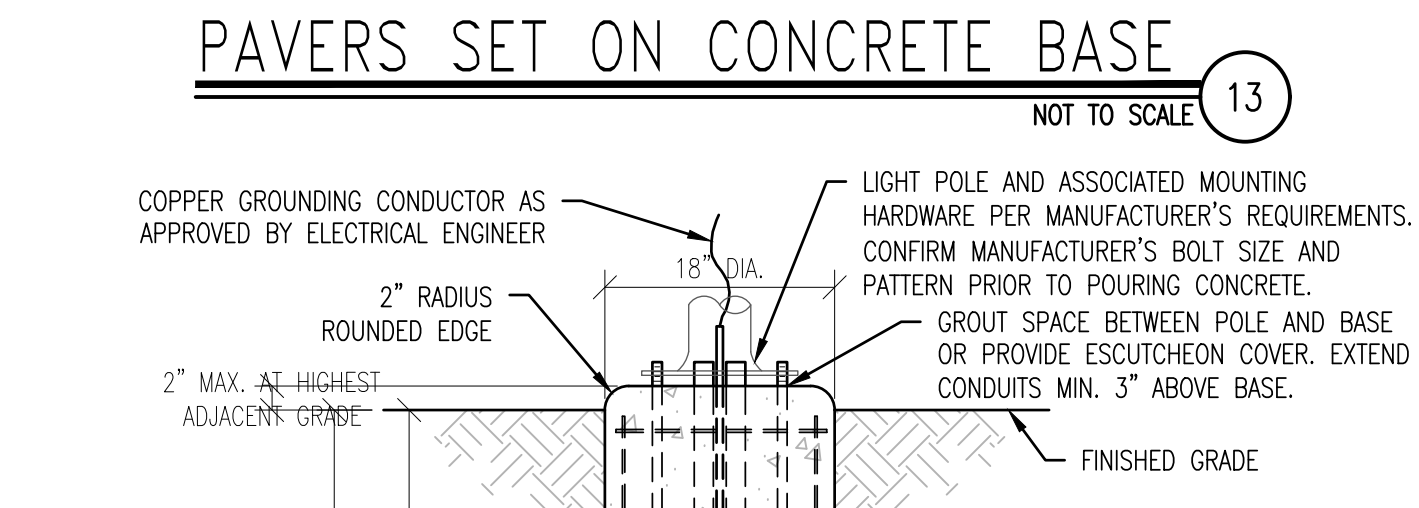
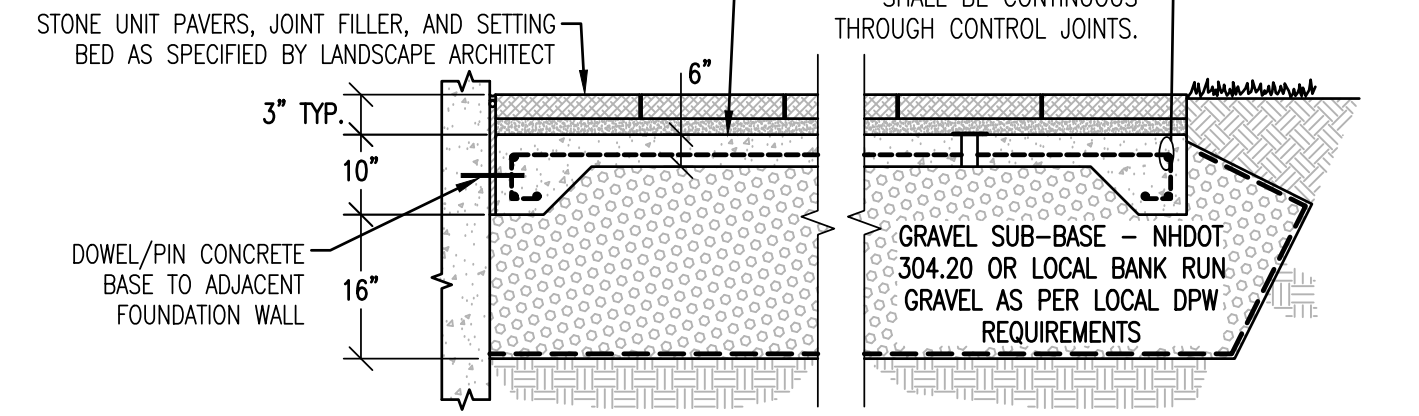
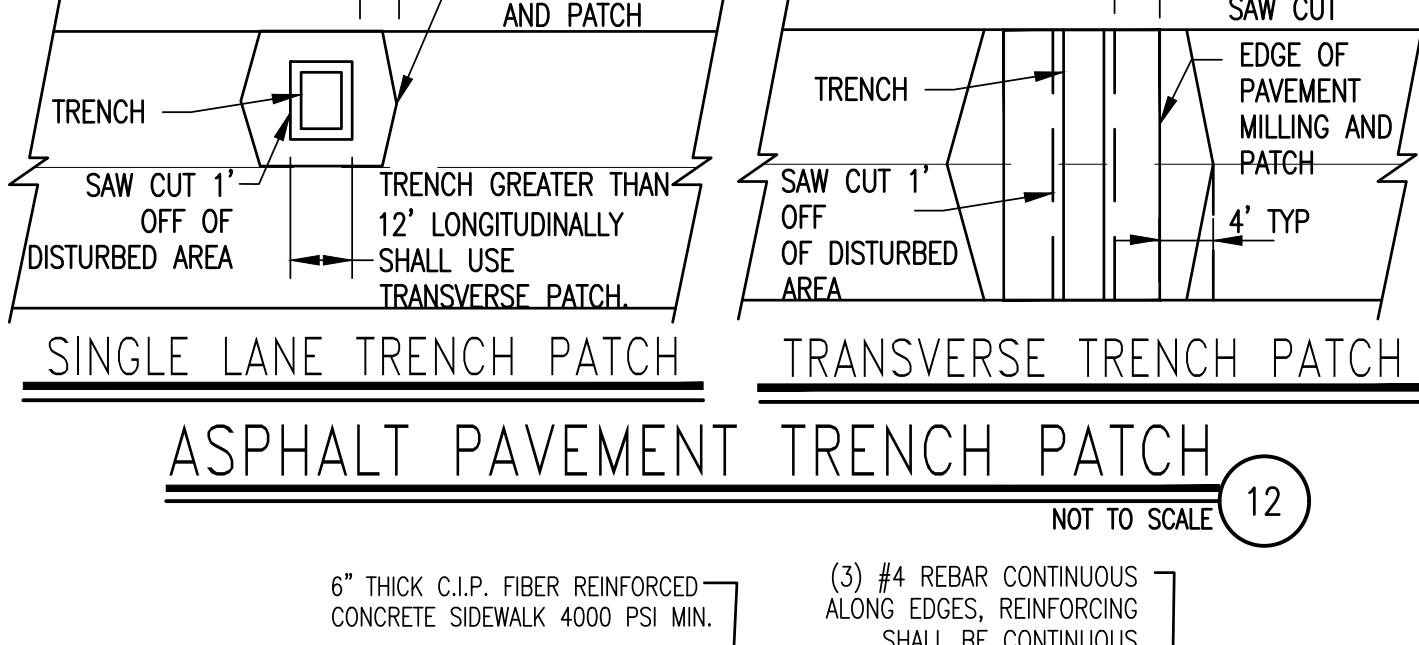
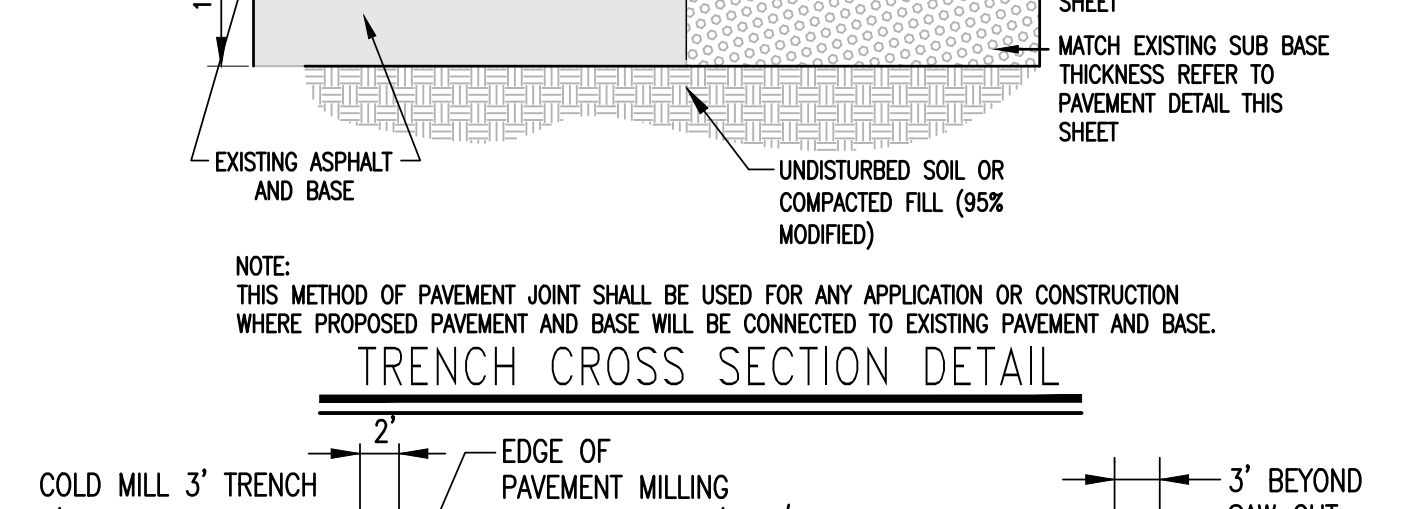
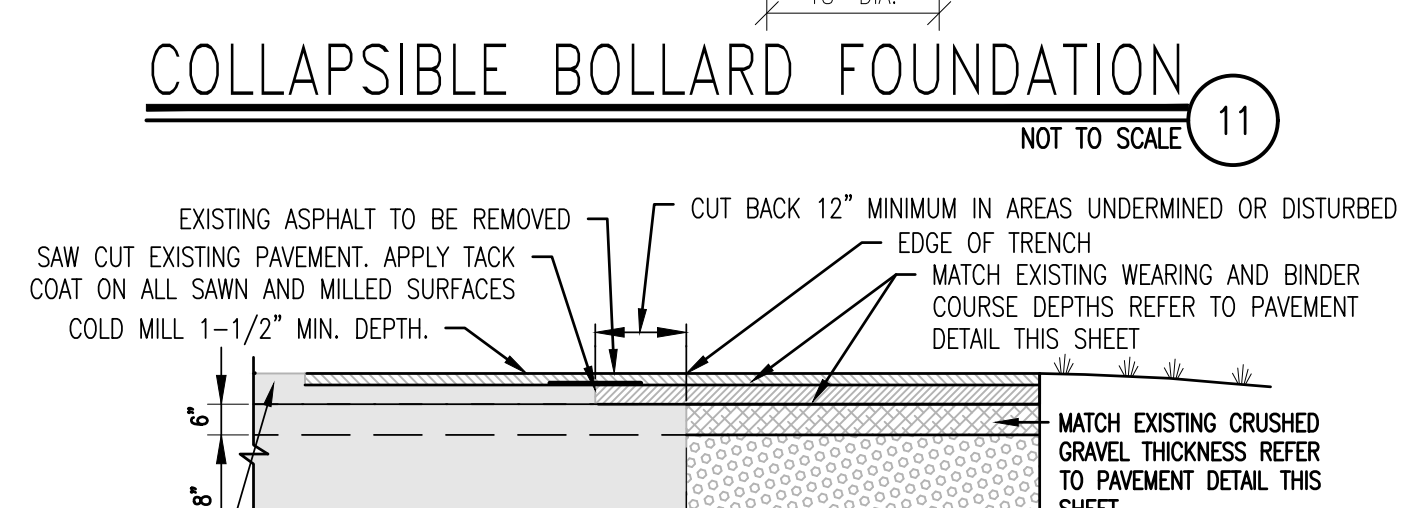
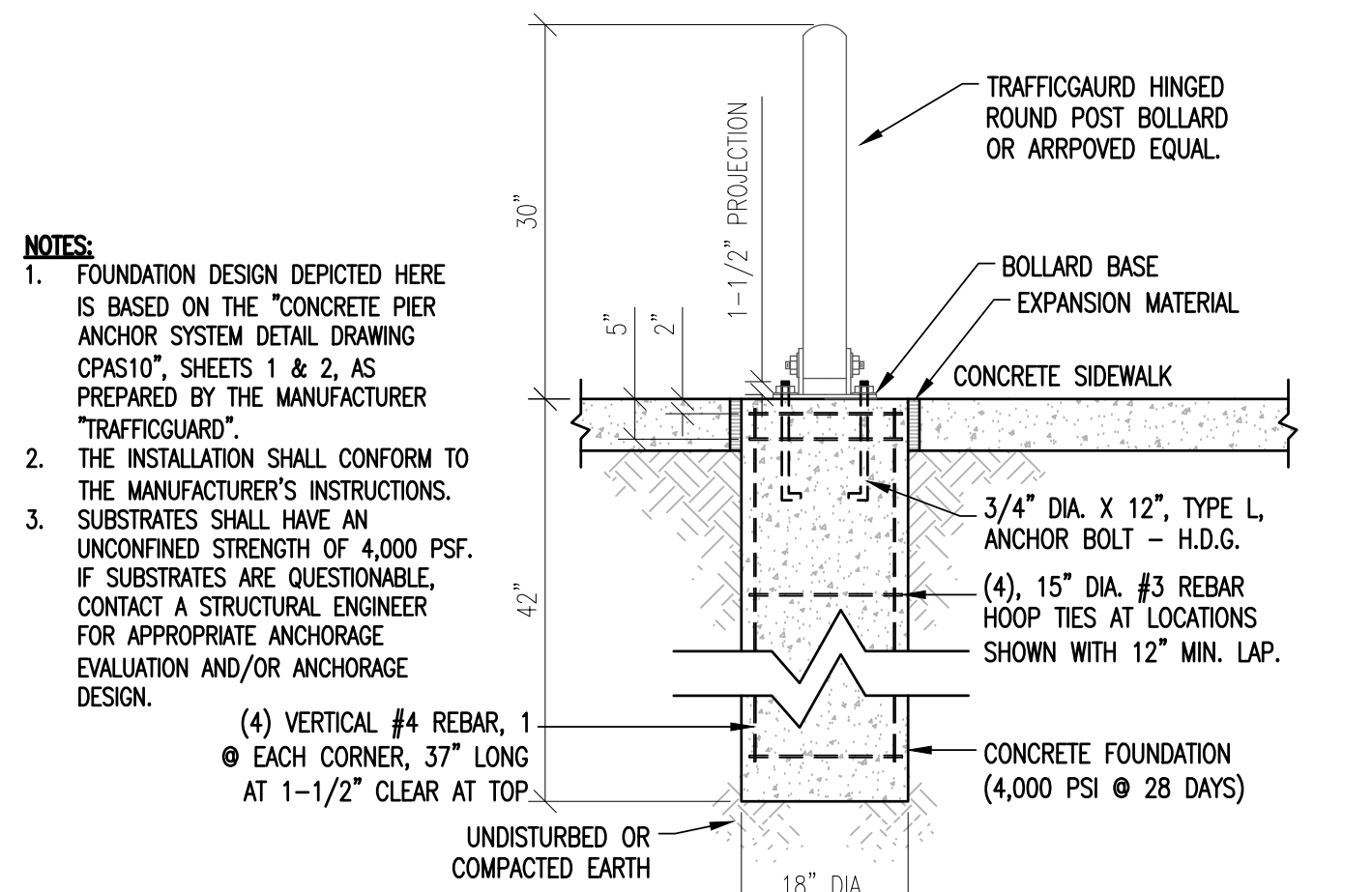
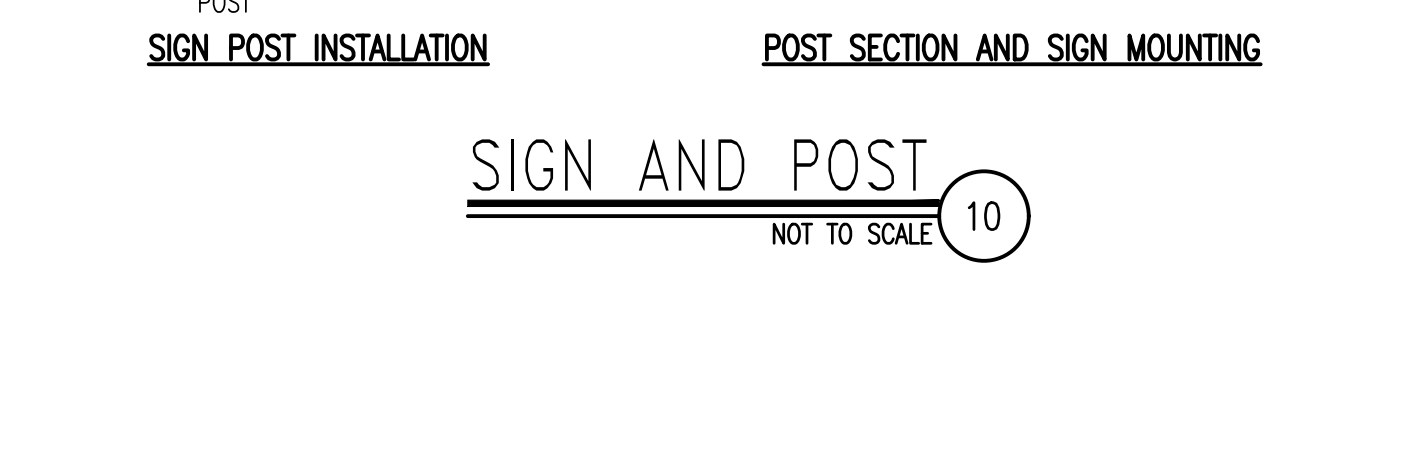
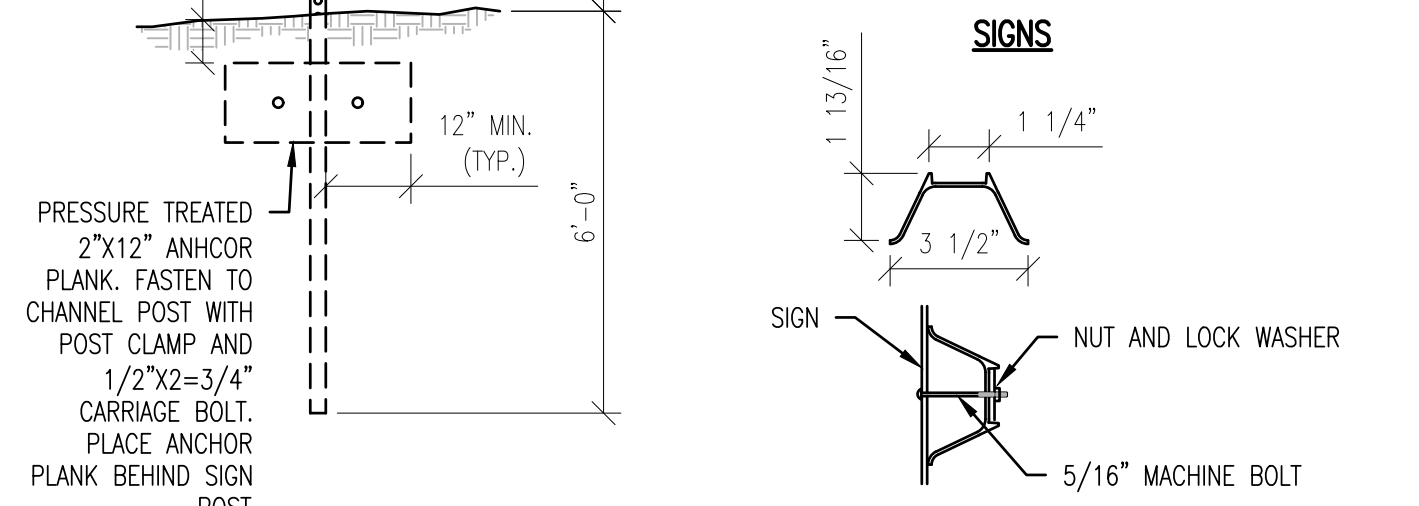
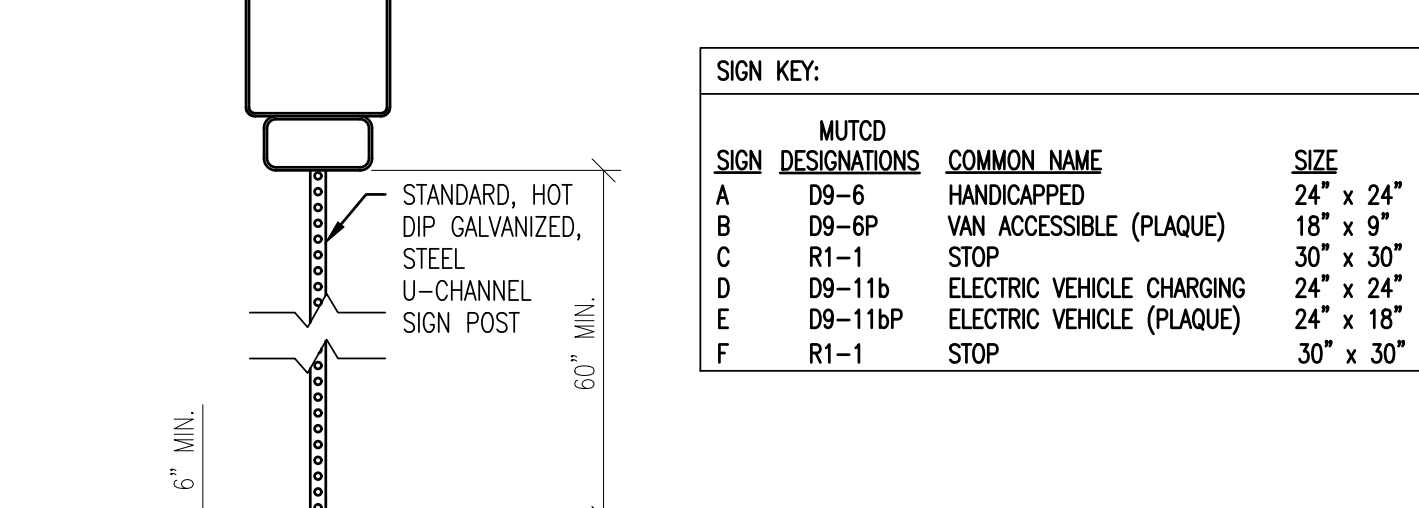
**ROADWAY/PARKING PAVEMENT**  
NOT TO SCALE 1



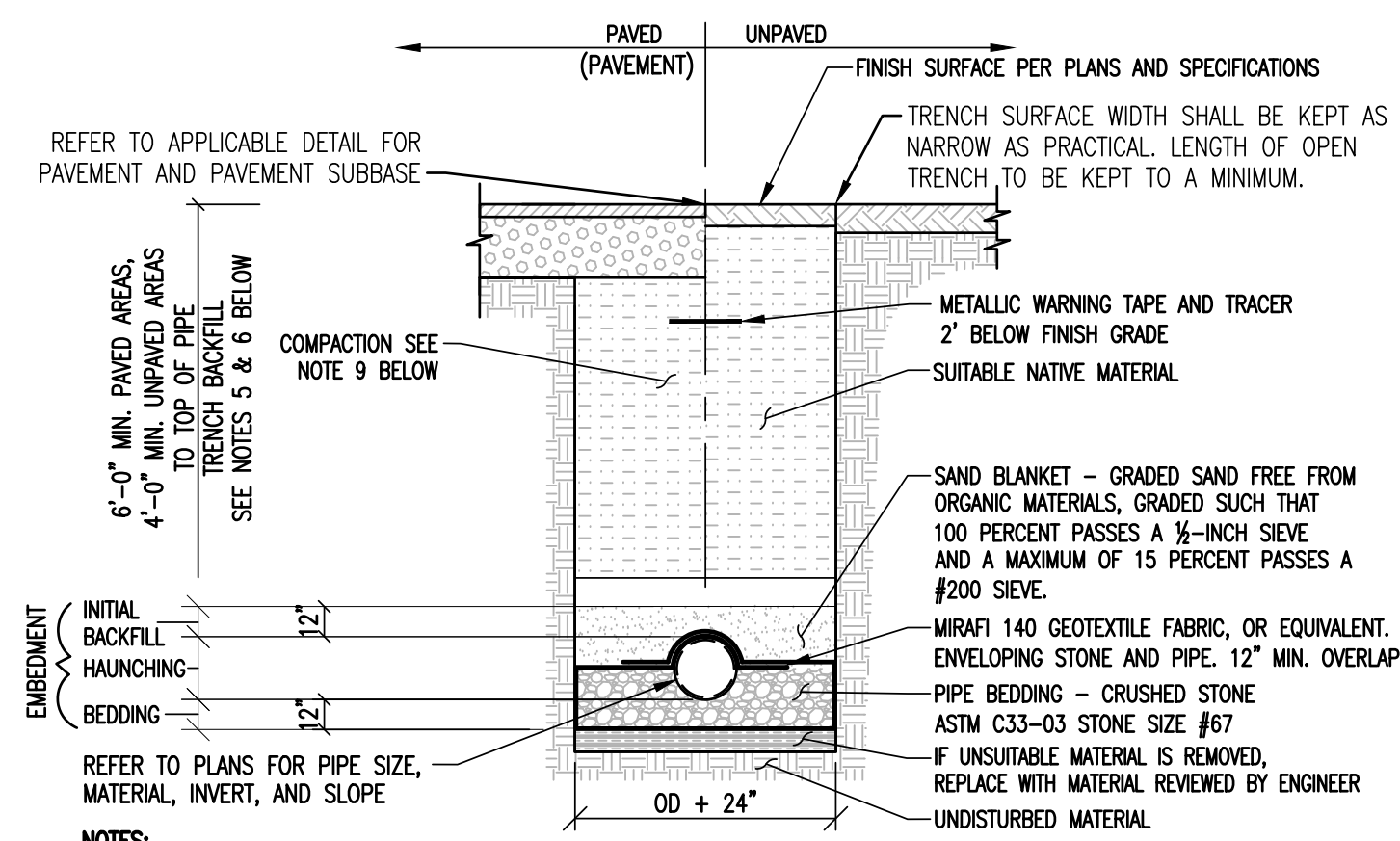
- CONCRETE NOTES:**
- CLASS B CONCRETE SHALL HAVE:
    - MIN. COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS
    - AIR ENTRAINMENT OF 5% TO 7% BY VOLUME
    - MAXIMUM WATER-CEMENT RATIO= 0.60
    - SLUMP: 2-4 INCHES BEFORE ADDITION OF WATER REDUCER, 6-8 INCHES AFTER THE ADDITION OF WATER REDUCER.
  - PLACE NO CONCRETE WHEN AMBIENT TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT OR MORE THAN 90 DEGREES FAHRENHEIT.
  - NO CONCRETE SHALL BE DROPPED MORE THAN SIX FEET INSIDE A FORM.
  - MAINTAIN TEMPERATURE OF CONCRETE SURFACE AT MINIMUM 50 DEGREES FAHRENHEIT FOR 72 HOURS AFTER PLACING CONCRETE. PREHEAT ALL ENCLOSURES FOR A MINIMUM OF 2 HOURS TO PROVIDE A MIN. SURFACE TEMPERATURE OF 45 DEGREES FAHRENHEIT.
  - DO NOT SET AND CURE ALL THRUST BLOCKS, CONCRETE SUPPORTS, AND ANCHORS A MINIMUM OF 24 HOURS BEFORE BACKFILLING.
  - COMPLETELY CURE AND SET CONCRETE BEFORE ANY HYDROSTATIC OR LEAKAGE TESTING OF PIPELINE.
  - NONSHRINK GROUT SHALL BE HALCO TRADEMARK, AS MANUFACTURED BY LEHN & FINK INDUSTRIAL PRODUCTS.
  - DO NOT PLACE ANY MORTAR OR GROUT WHEN AMBIENT TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT.
  - MORTAR FOR MANHOLES SHALL CONSIST OF THE FOLLOWING:
    - CEMENT-TYPE II, ASTM C150.
    - HYDRATED LIME-TYPE N, ASTM C207.
    - SAND-ASTM C 33, FINE AGGREGATES FOR CONCRETE.
    - WATER-CLEAN, SUITABLE FOR DRINKING.
  - MIX(BY VOLUME): 1 PART CEMENT, 1/2 PART LIME, 4 1/2 PARTS SAND.



**CONC. SIDEWALK JOINTS, FINISH, AND NOTES**  
NOT TO SCALE 9



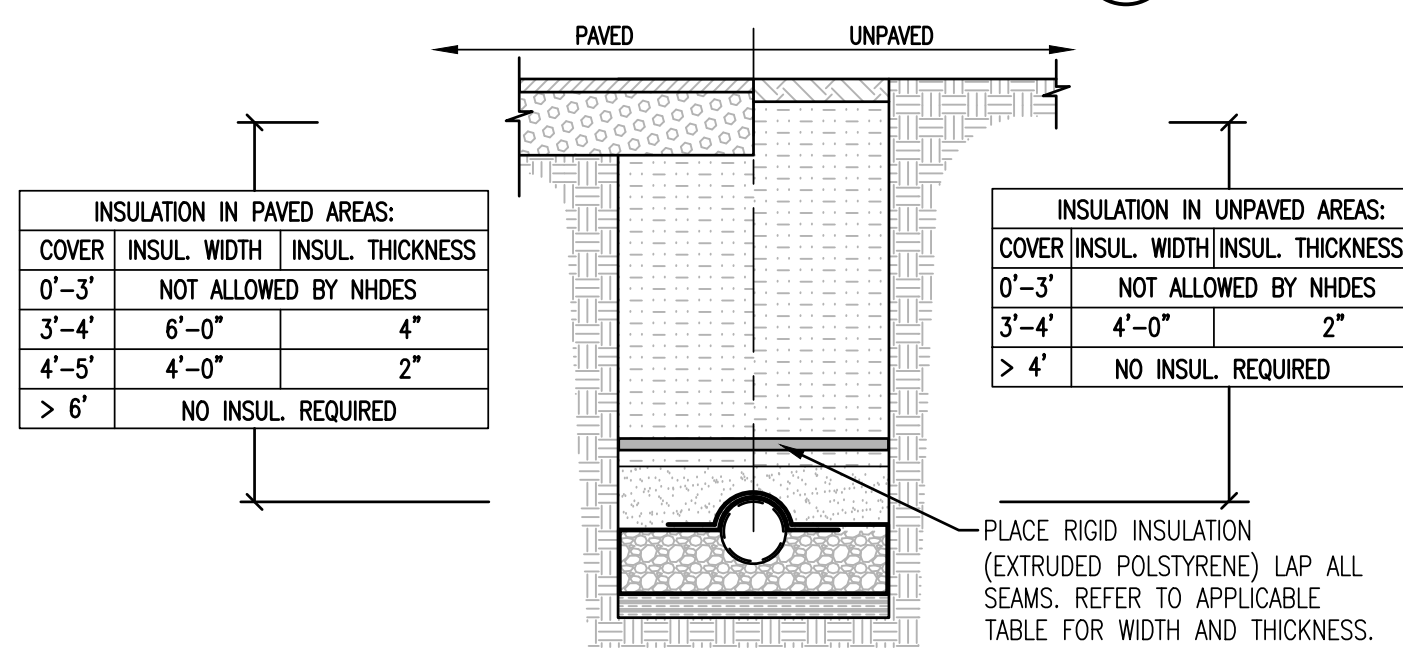




- NOTES:**
- UNLESS OTHERWISE NOTED, ASSUME CLASS "C" SOILS. PERFORM ALL EXCAVATIONS TO OSHA REQUIREMENTS.
  - BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.
  - FOR SEWER LINES THE MINIMUM DEPTH TO THE TOP OF THE PIPE SHALL BE 6'-0" IN PAVED AREAS AND 4'-0" IN UNPAVED AREAS. SHALLOWER DEPTHS REQUIRE APPROVAL FROM THE ENGINEER. REFER TO INSULATION OVER SHALLOW SEWER LINE DETAIL.
  - LEDGE, ROCK, BOULDERS AND LARGE STONES SHALL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE OF SIX INCHES BELOW AND ON EACH SIDE OF ALL PIPES.
  - TRENCH BACKFILL MATERIAL, INCLUDING ROADWAY LOCATIONS, SHALL BE NATURAL MATERIALS EXCAVATED FROM THE TRENCH DURING CONSTRUCTION AND FREE OF UNSUITABLE MATERIALS AS DEFINED IN THE EARTHWORK SPECIFICATIONS INCLUDED ON THESE PLANS.
  - WHEN APPLICABLE INSTALL PIPE WITH BELL ENDS DOWN SLOPE. PREVENT SEDIMENT FROM ENTERING NEW SEWER SYSTEM DURING CONSTRUCTION.
  - ALLOWABLE TRENCH WIDTH AT A PLANE 12 INCHES ABOVE THE PIPE SHALL BE NO MORE THAN 36 INCHES FOR SEWER PIPE LESS THAN 15 INCHES IN DIAMETER.
  - NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PIPE TO INSURE PIPE IS NOT DAMAGED.
  - BACKFILL MATERIALS SHALL BE COMPACTED, IN 12" LAYERS, TO 92% OF MODIFIED PROCTOR (ASTM 1557) TO WITHIN 3 FEET OF FINISHED GRADE. IN AREAS UNDER ROADWAYS, DRIVES, AND PARKING THE UPPER 3 FEET SHALL BE COMPACTED, IN 6" LAYERS, TO 95% MODIFIED PROCTOR (ASTM 1557) AND IN LAWN OR OTHER UNDEVELOPED SPACE THE UPPER 3 FEET SHALL BE COMPACTED TO 92% MODIFIED PROCTOR.

### SEWER TRENCH (GRAVITY)

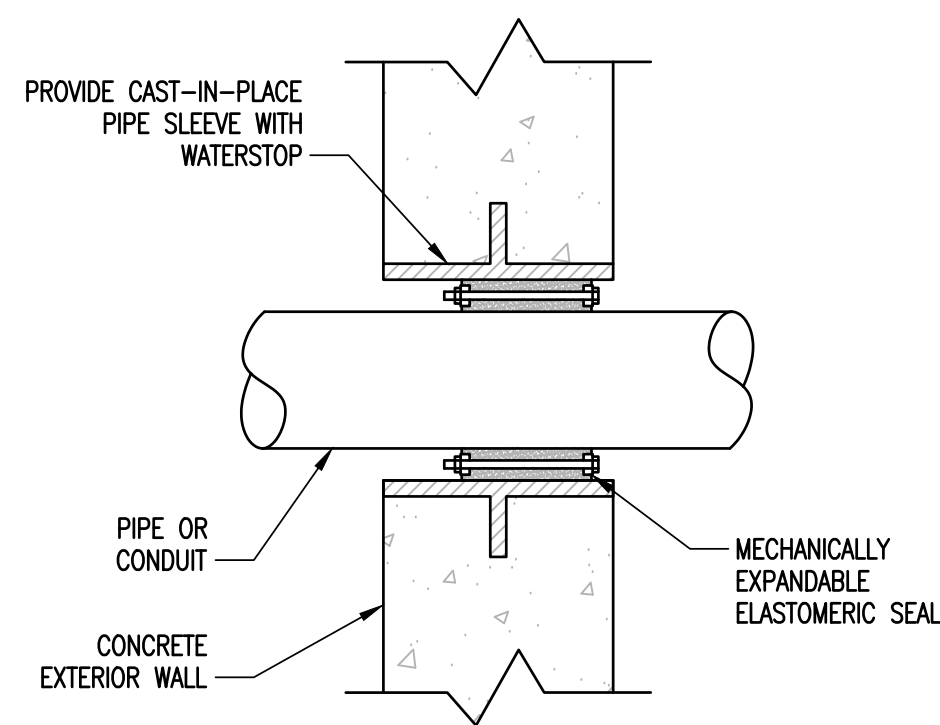
NOT TO SCALE 1



- NOTES:**
- REFER TO APPLICABLE TRENCH DETAIL FOR SPECIFIC BACKFILL INFORMATION.
  - NOTIFY DEPARTMENT OF PUBLIC WORKS TO REVIEW INSTALLATION AND BACKFILL.
  - ALL SHALLOW SEWER INSTALLATIONS MUST BE APPROVED BY ENGINEER.
  - THE MINIMUM DEPTH TO THE TOP OF THE PIPE SHALL BE 6'-0" IN PAVED AREAS AND 4'-0" IN UNPAVED AREAS. SHALLOWER DEPTHS REQUIRE APPROVAL FROM THE ENGINEER. REFER TO INSULATION OVER SHALLOW SEWER LINE DETAIL.

### SHALLOW SEWER LINE INSULATION

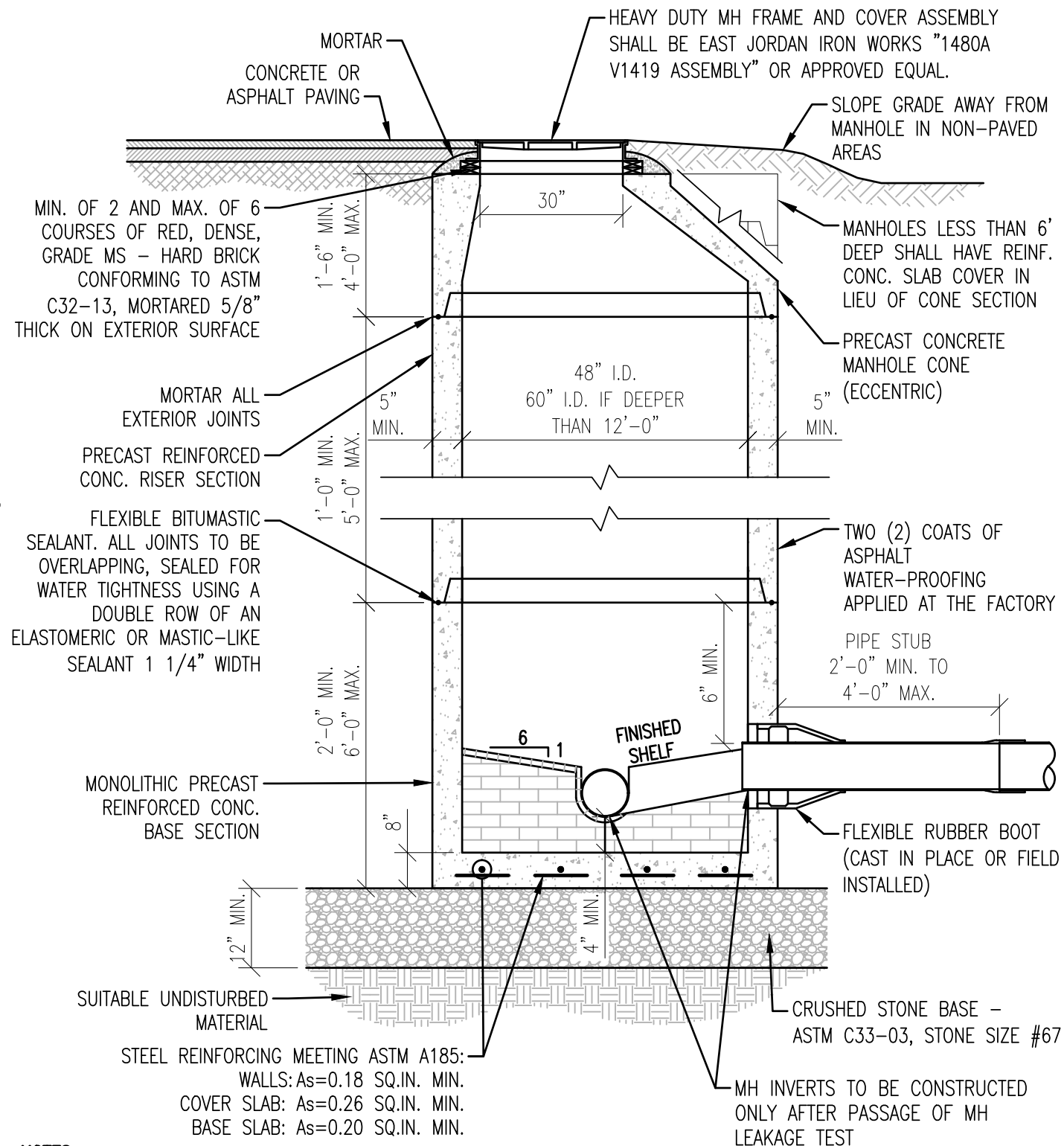
NOT TO SCALE 2



- WALL PENETRATION NOTES**
- REFER TO STRUCTURAL DETAILS FOR REINFORCING AT WALL OPENINGS.
  - REFER TO MECHANICAL AND ELECTRICAL PLANS FOR OPENING LOCATIONS

### EXTERIOR BELOW GRADE WALL PIPE PENETRATION

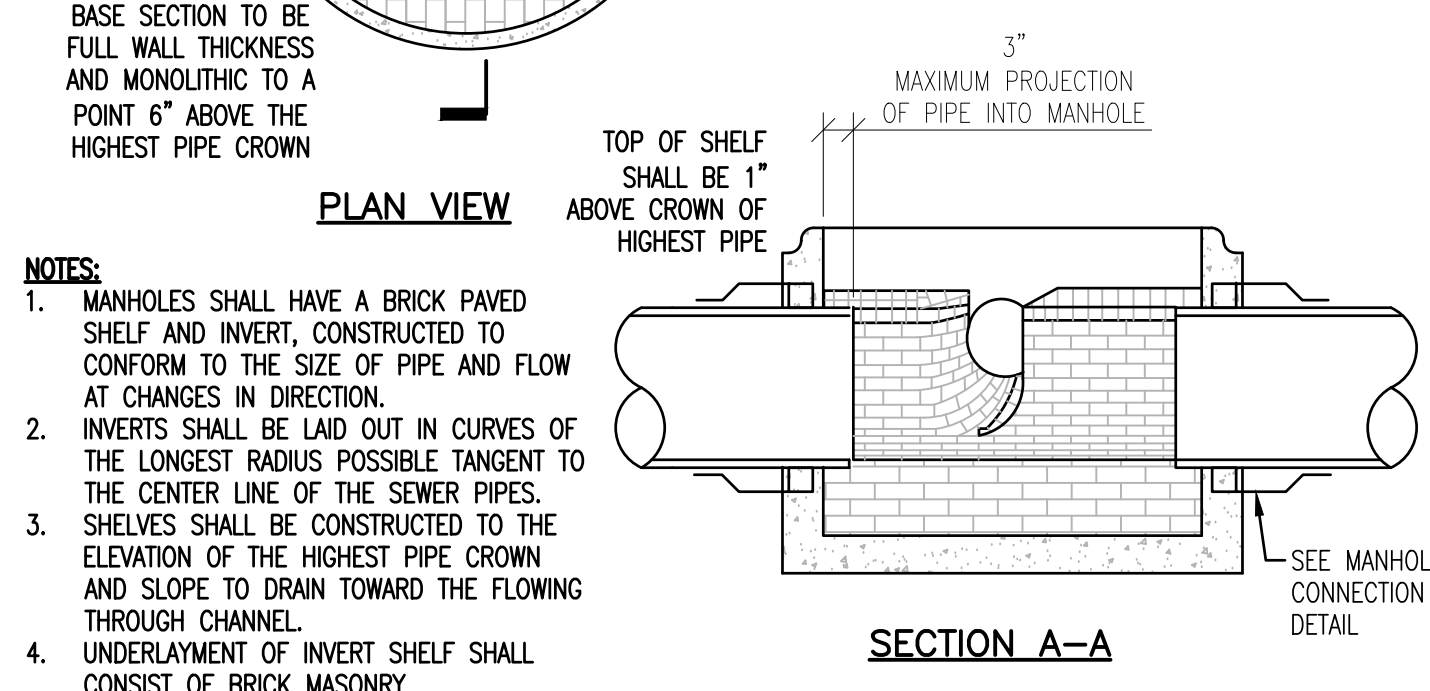
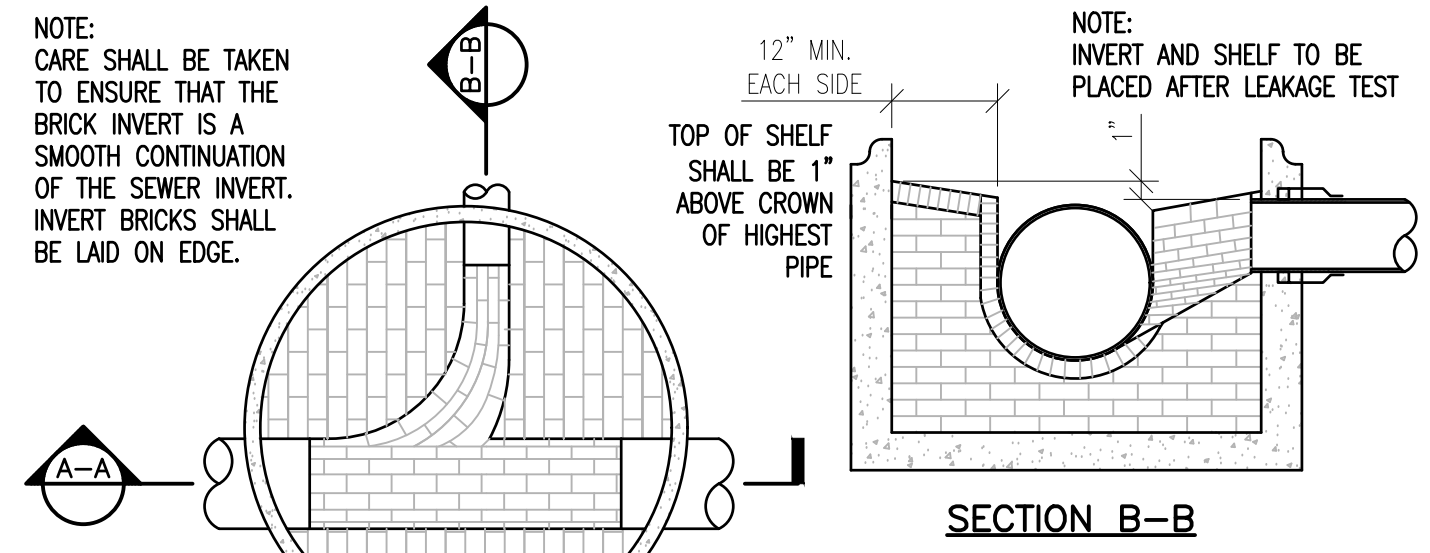
NOT TO SCALE 3



- NOTES:**
- INVERTS OF MANHOLES SHALL BE FORMED WITH GRADE SS - HARD BRICK CONFORMING TO ASTM C32-13.
  - PROVIDE SMOOTH SWEEPING TRANSITIONS BETWEEN INVERTS OF INTERSECTING PIPE.
  - IF DEPTH OF MANHOLE IS 6 FT. OR LESS FROM RIM TO CENTERLINE INVERT, THEN A FLAT TOP MAY BE INSTALLED. IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 6 FT., THEN AN ECCENTRIC CONICAL TOP SHALL BE INSTALLED.
  - MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF THE INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING.
  - MANHOLE AND COVER SHALL BE DESIGNED FOR H2O LOADING.
  - MANHOLE SHALL CONFORM TO ASTM C478 SPECIFICATIONS FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
  - CONCRETE FC=4,000 PSI @ 28 DAYS MINIMUM
  - BASE SECTION SHALL BE A ONE POUR MONOLITHIC SECTION

### SEWER MANHOLE

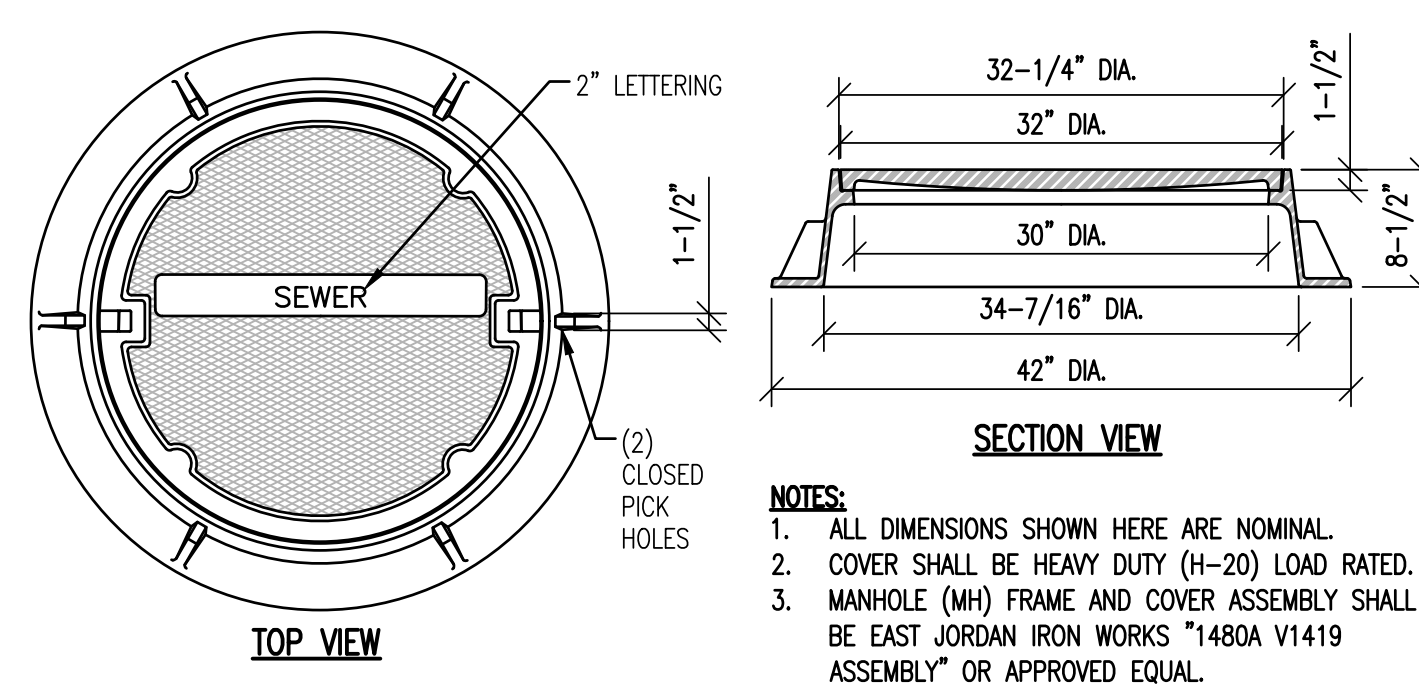
NOT TO SCALE 4



- NOTES:**
- MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION.
  - INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES.
  - SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL.
  - UNDERLAYMENT OF INVERT SHELF SHALL CONSIST OF BRICK MASONRY.

### SEWER MANHOLE INVERT AND SHELF

NOT TO SCALE 5



### SEWER MANHOLE FRAME & COVER

NOT TO SCALE 6

- NOTES:**
- ALL DIMENSIONS SHOWN HERE ARE NOMINAL.
  - COVER SHALL BE HEAVY DUTY (H-20) LOAD RATED.
  - MANHOLE (MH) FRAME AND COVER ASSEMBLY SHALL BE EAST JORDAN IRON WORKS "1480A V1419 ASSEMBLY" OR APPROVED EQUAL.



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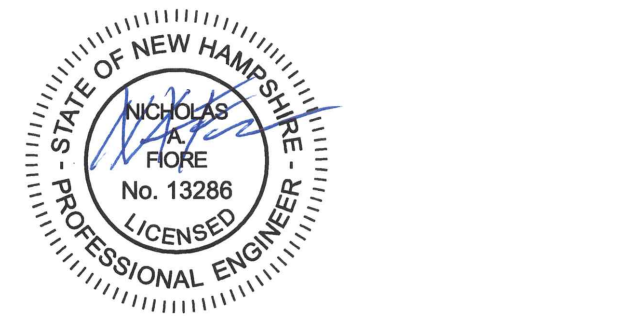
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DATE ISSUED: 03/27/2023  
Drawn: EV  
Checked: NAF

REVISIONS:

#	Date	Description
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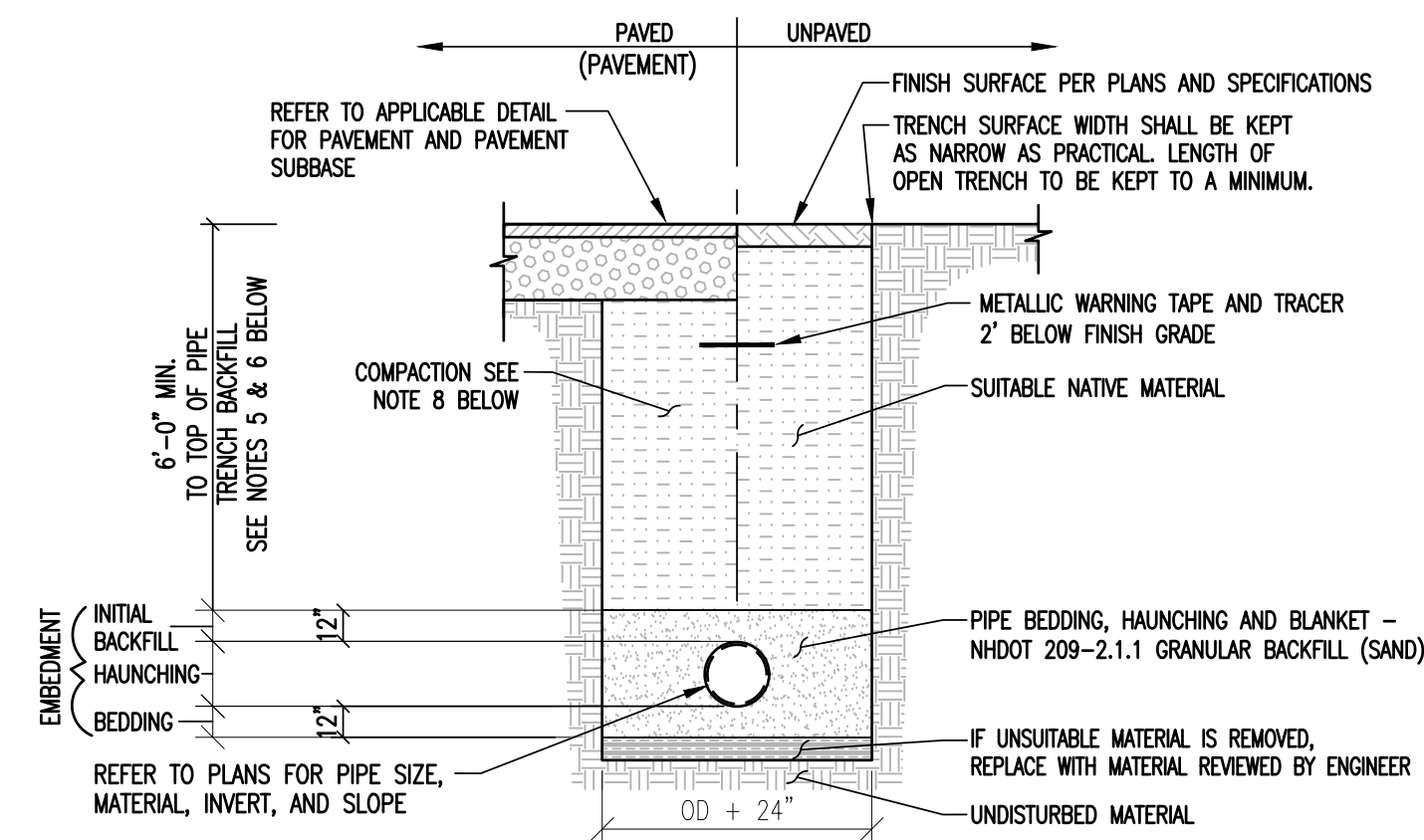
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Meriden, NH 03770

SEWER DETAILS

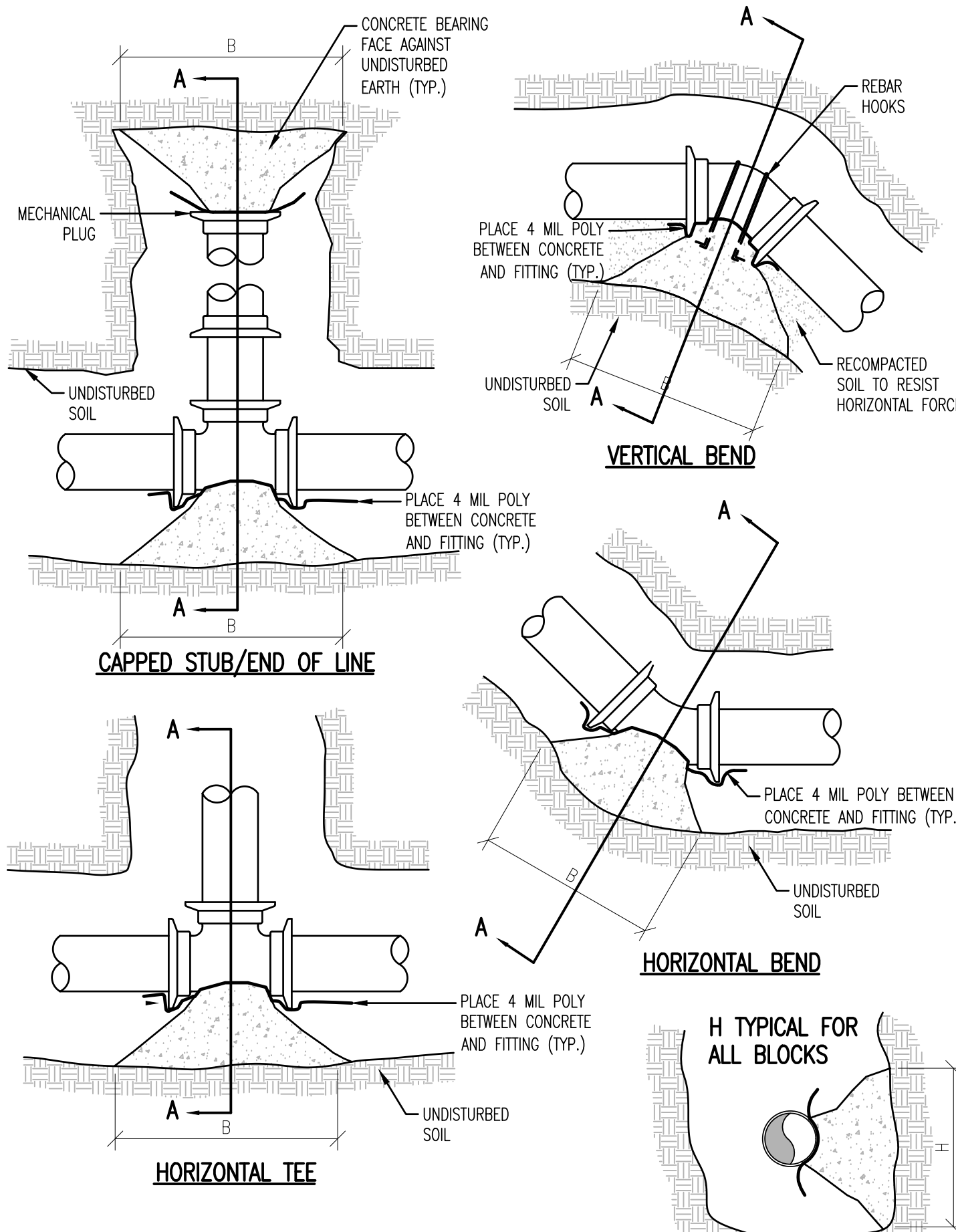
C4.2





- NOTES:**
- UNLESS OTHERWISE NOTED, ASSUME CLASS "C" SOILS. PERFORM ALL EXCAVATIONS TO OSHA REQUIREMENTS.
  - BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR FULL LENGTH OF PIPE.
  - PROVIDE 6"-0" MINIMUM COVER OVER WATER PIPE. OTHERWISE, REFER TO INSULATION OVER SHALLOW WATER LINE DETAIL.
  - INSTALL WATER PIPE IN ACCORDANCE WITH AWWA STANDARD C600.
  - LEDGE, ROCK, BOULDERS AND LARGE STONES SHALL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE OF SIX INCHES BELOW AND ON EACH SIDE OF ALL PIPES.
  - TRENCH BACKFILL MATERIAL, INCLUDING ROADWAY LOCATIONS, SHALL BE NATURAL MATERIALS EXCAVATED FROM THE TRENCH DURING CONSTRUCTION AND FREE OF UNSUITABLE MATERIALS AS DEFINED IN THE EARTHWORK SPECIFICATIONS INCLUDED ON THESE PLANS.
  - NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PIPE TO INSURE PIPE IS NOT DAMAGED.
  - BACKFILL MATERIALS SHALL BE COMPACTED, IN 12" LAYERS, TO 92% OF MODIFIED PROCTOR (ASTM 1557) TO WITHIN 3 FEET OF FINISHED GRADE. IN AREAS UNDER ROADWAYS, DRIVES, AND PARKING THE UPPER 3 FEET SHALL BE COMPACTED, IN 6" LAYERS, TO 95% MODIFIED PROCTOR (ASTM 1557) AND IN LAWN OR OTHER UNDEVELOPED SPACE THE UPPER 3 FEET SHALL BE COMPACTED TO 92% MODIFIED PROCTOR.

**WATER TRENCH** 1  
NOT TO SCALE



**TABLE 2 - THRUST DEVELOPED PER 100psi PRESSURE (lbs force)**

PIPE DIAMETER IN.	VALVES AND DEAD ENDS, TEES	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4	1810	2560	1390	635	320
6	3740	5290	2860	1370	690
8	6430	9100	4920	2320	1170
10	9680	13680	7410	3610	1820
12	13690	19350	10470	5080	2550
14	18380	25990	14100	6100	3080
16	23780	33630	18280	7960	4020

- SECTION A-A**
- NOTES:**
- PERFORM HYDROSTATIC AND LEAKAGE TEST PRESSURE PER SPECIFICATIONS.
  - PLACE 4 MIL POLYETHYLENE BETWEEN FITTINGS AND THRUST BLOCKS.
  - CONCRETE SHALL BE CLASS B.
  - ON ALL THRUST BLOCKS, B SHALL BE THE GREATER DIMENSION, USE 1.5:1 TO 2:1 FOR B:H.

**TABLE 1 - BEARING STRENGTH OF UNDISTURBED SOIL**

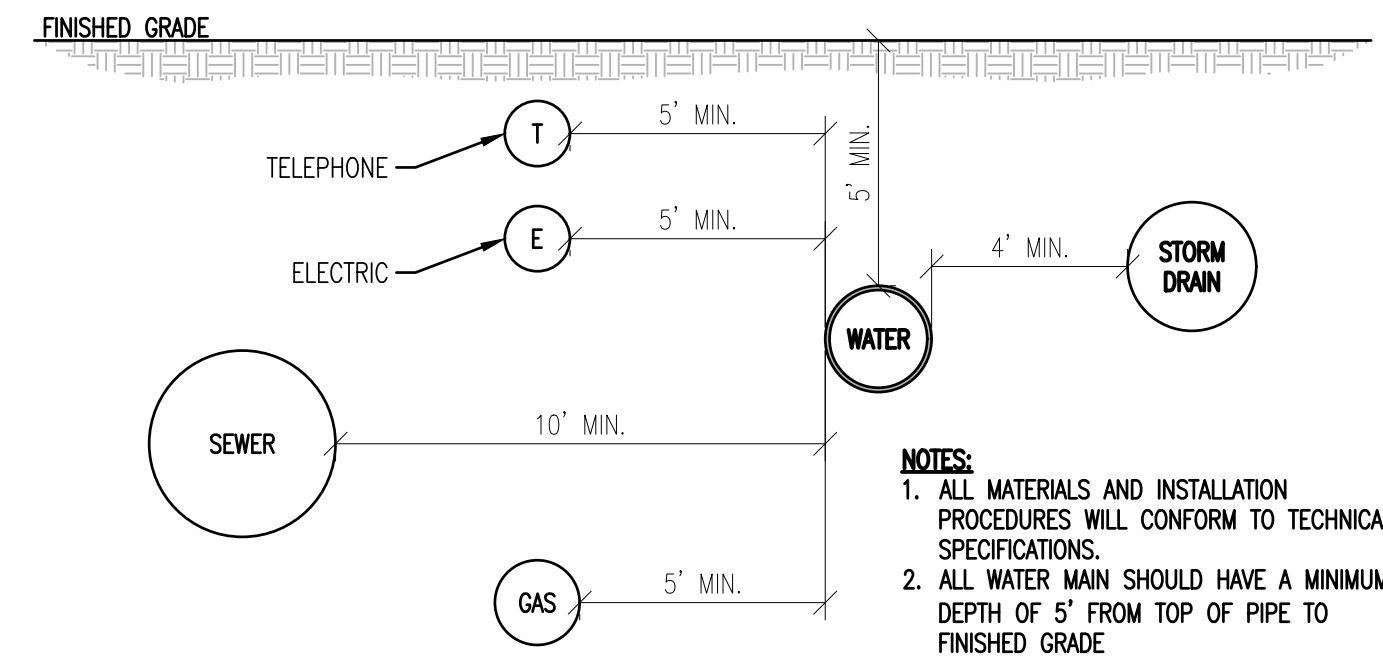
SOIL TYPE	BEARING STRENGTH
PEAT, ETC.	0 lb/ft <sup>2</sup>
SOFT CLAY	500 lb/ft <sup>2</sup>
SAND	1000 lb/ft <sup>2</sup>
SAND AND GRAVEL	1500 lb/ft <sup>2</sup>
SAND AND GRAVEL WITH CLAY	2000 lb/ft <sup>2</sup>
SAND AND GRAVEL CEMENTED WITH CLAY	4000 lb/ft <sup>2</sup>
HARD PAN	5000 lb/ft <sup>2</sup>

**DETERMINING MINIMUM BEARING FACE AREA:**

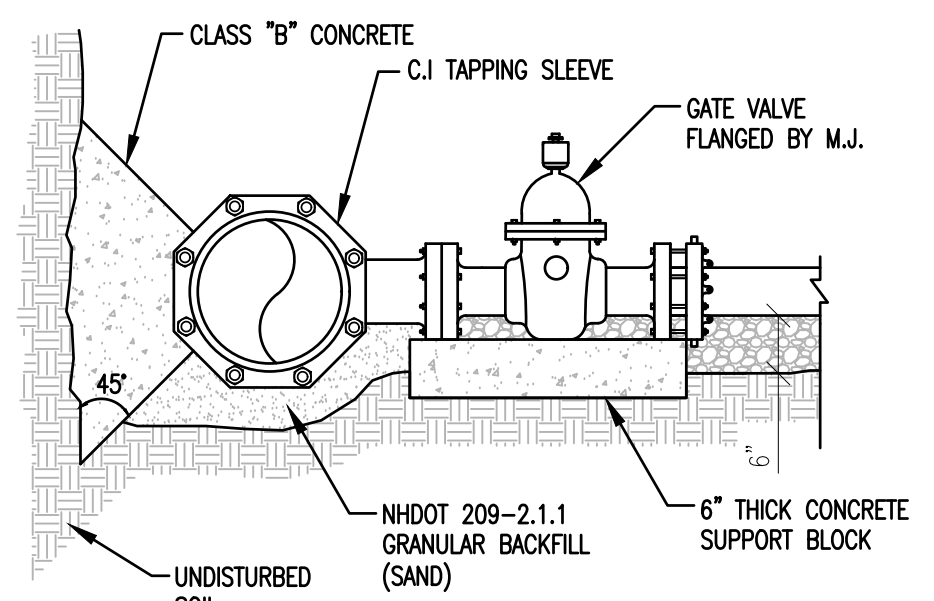
THE AREA (ft<sup>2</sup>) SHALL BE CALCULATED BY DETERMINING THE TOTAL THRUST GENERATED AT THE FITTING. DIVIDE THE THRUST DEVELOPED (lbs force) (FROM TABLE 2) BY THE BEARING STRENGTH OF THE SOIL (FROM TABLE 1). THE RESULT IS THE AREA OF THE SOIL REQUIRED TO RESIST THE THRUST (A). THE AREA CALCULATED WILL BE FOR THE AREA OF CONCRETE UP AGAINST THE TRENCH WALL (i.e. THE BACK SIDE OF THE BLOCK). USE THE TEST PRESSURE TO DETERMINE THE TOTAL THRUST.

AREA = THRUST DEVELOPED (lbs force) / BEARING STRENGTH OF SOIL

**TYPICAL BEARING THRUST BLOCK** 2  
NOT TO SCALE

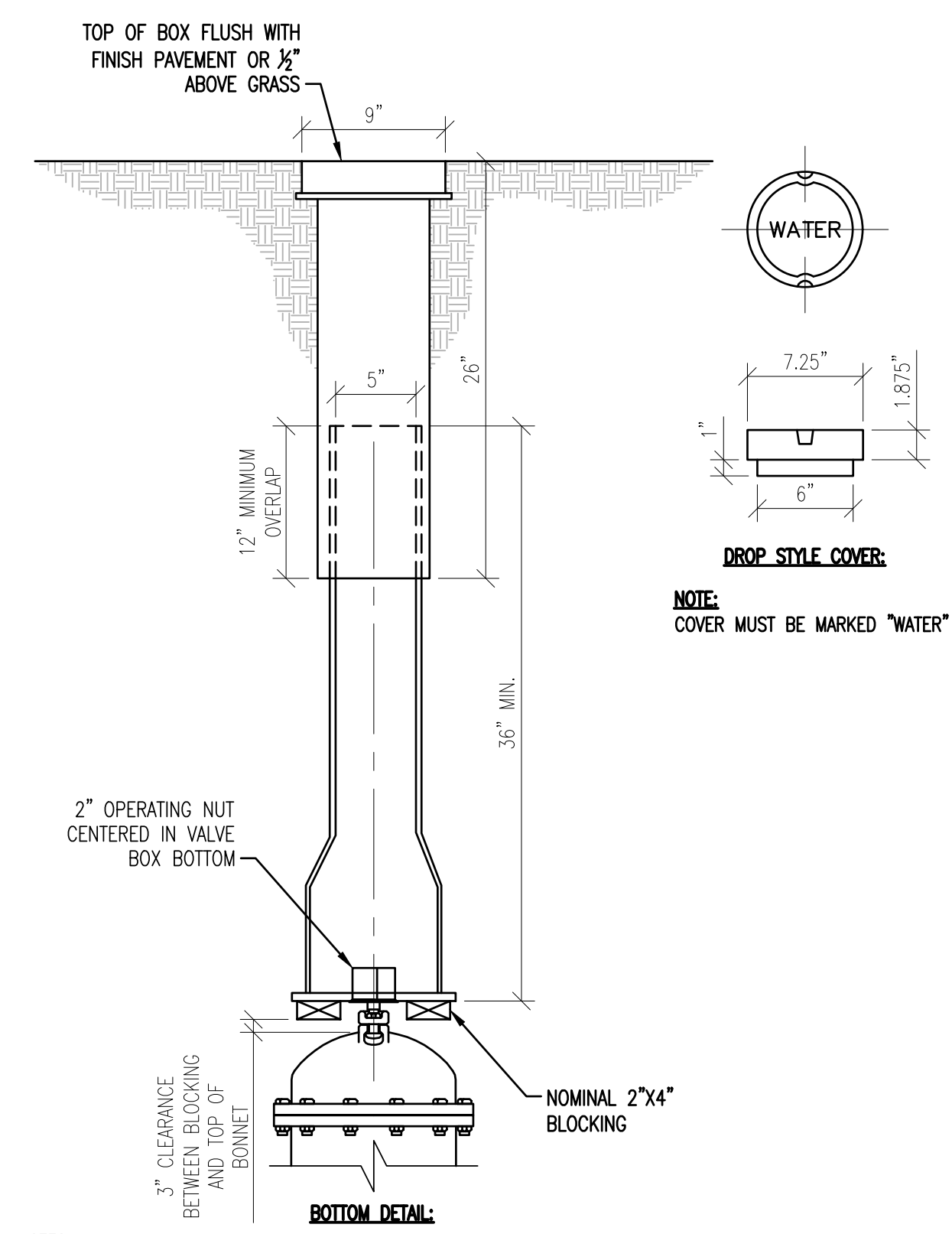


**WATER MAIN UTILITY SEPARATIONS** 3  
NOT TO SCALE



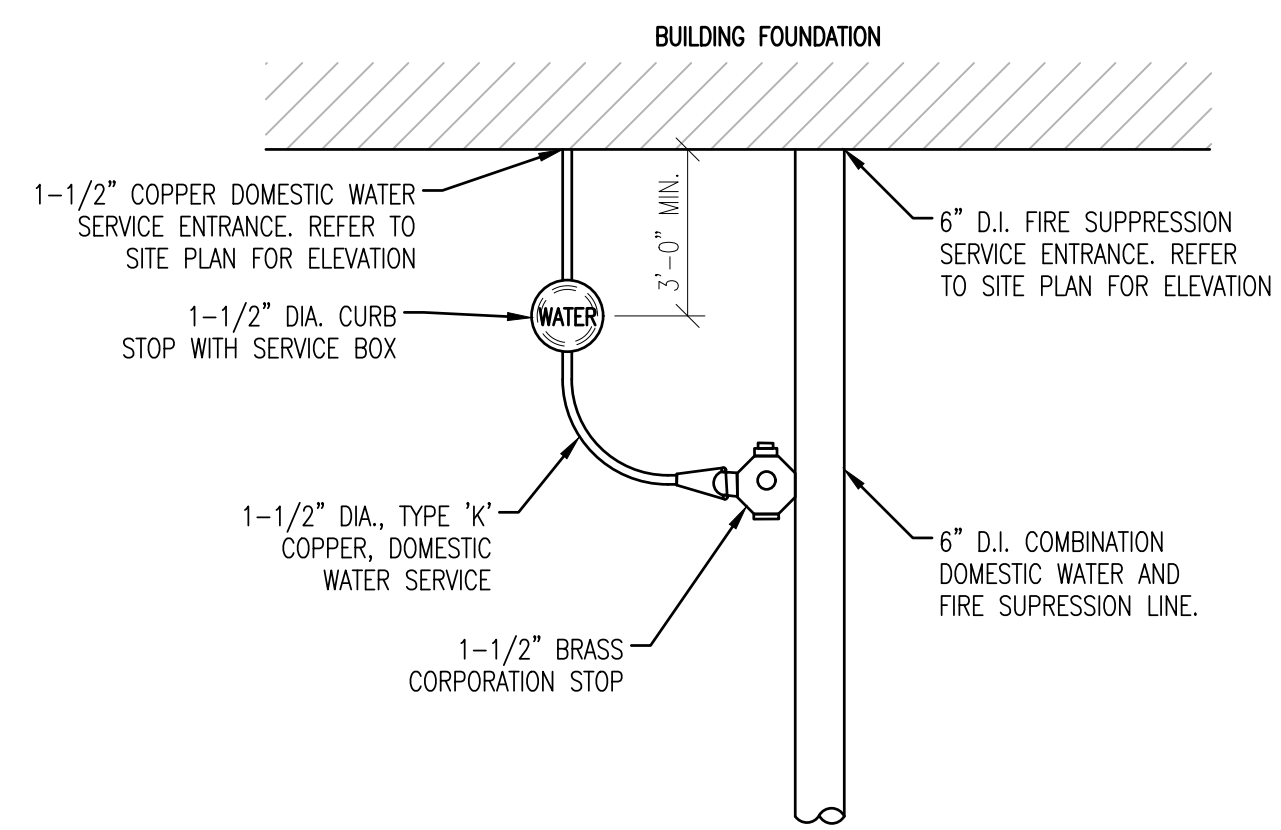
- NOTES:**
- AREA OF THRUST BLOCK BEARING AGAINST UNDISTURBED SOIL SHALL BE THE SAME AS FOR 1/4" BEND (90°) BEND.
  - UTILIZE MEGALUG MECHANICAL JOINT RESTRAINT ON M.J. END.
  - SEE TYPICAL GATE VALVE DETAIL FOR VALVE BOX INFORMATION.
  - SEE TYPICAL WATER TRENCH DETAIL FOR PIPE BEDDING REQUIREMENTS.

**TAPPING SLEEVE AND VALVE** 4  
NOT TO SCALE



- NOTES:**
- ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO TECHNICAL SPECIFICATIONS.
  - ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISHED GRADE.

**TYPICAL VALVE BOX** 5  
NOT TO SCALE



**TYPICAL WATER SERVICE ENTRANCE** 6  
NOT TO SCALE



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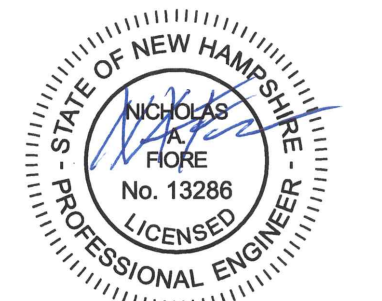
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Checked: NAF

REVISIONS:  
# Date Description



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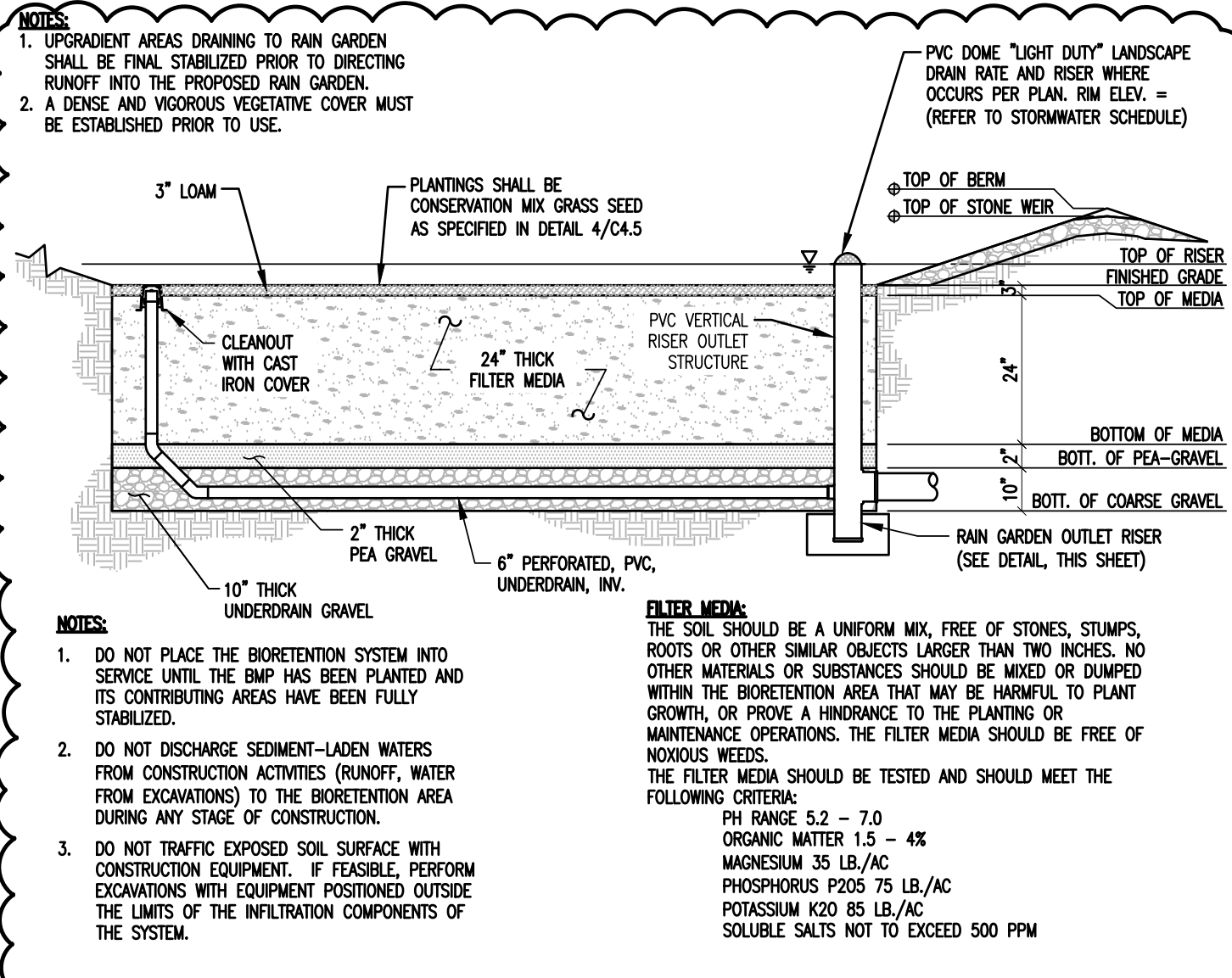
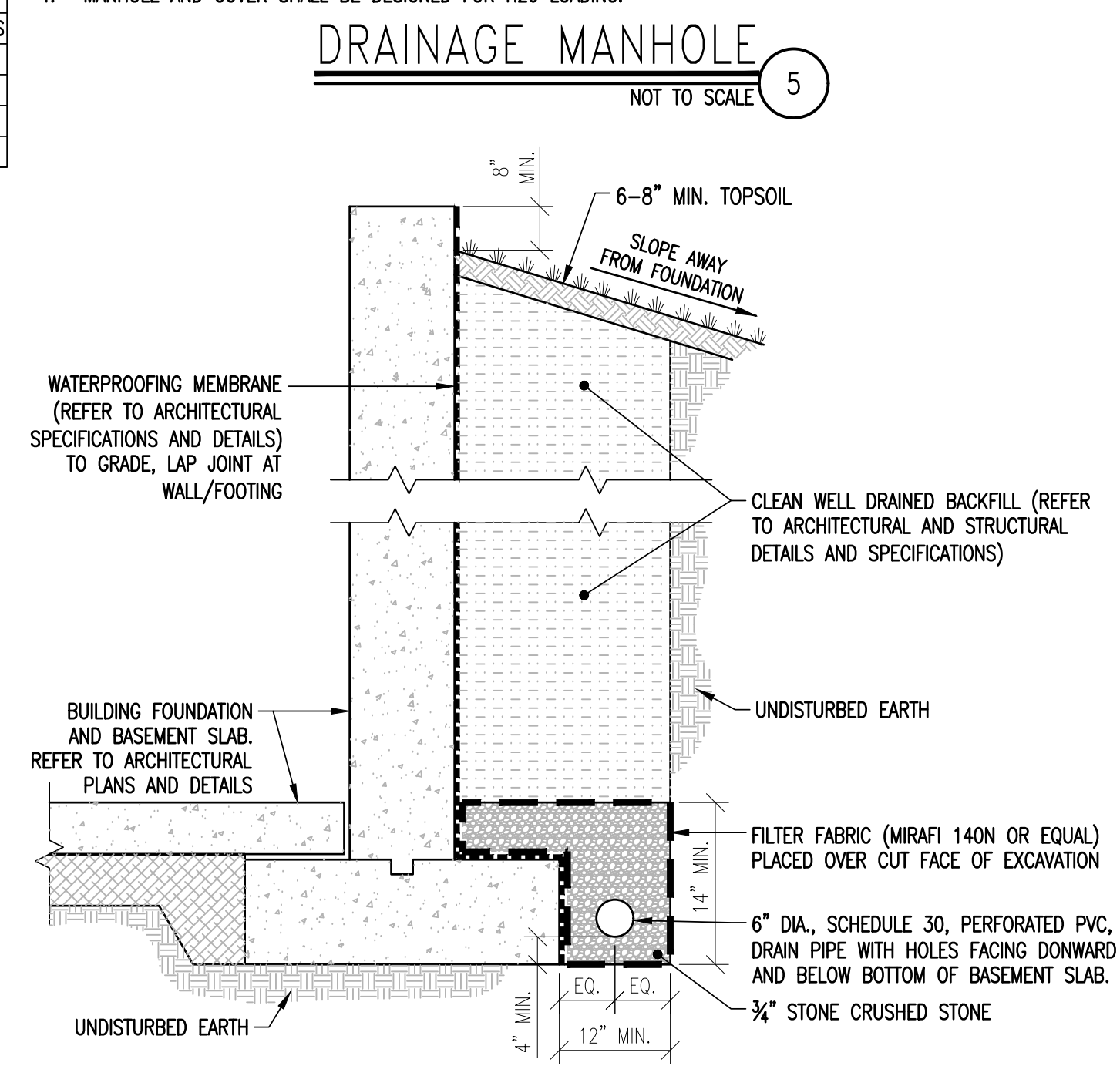
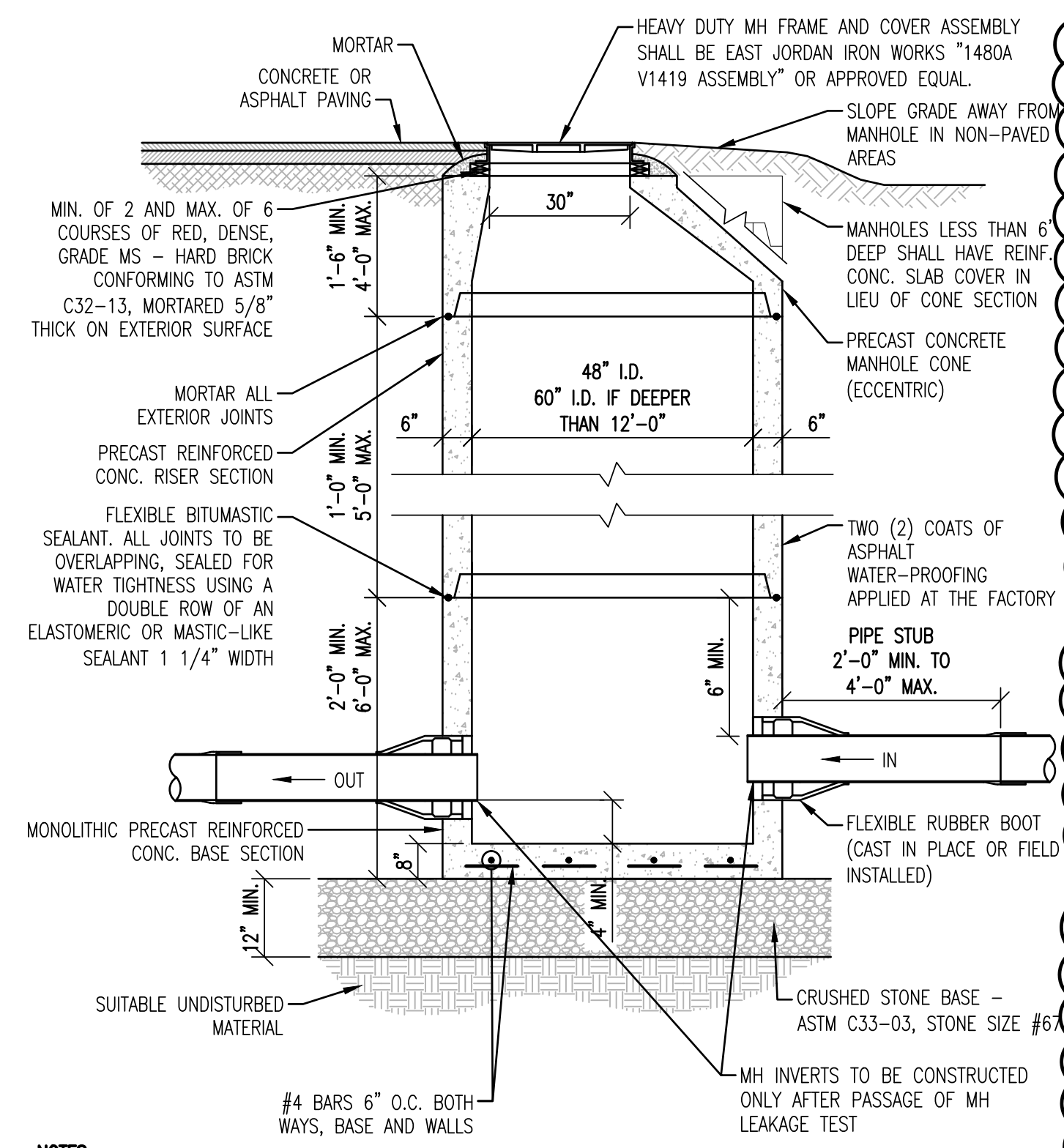
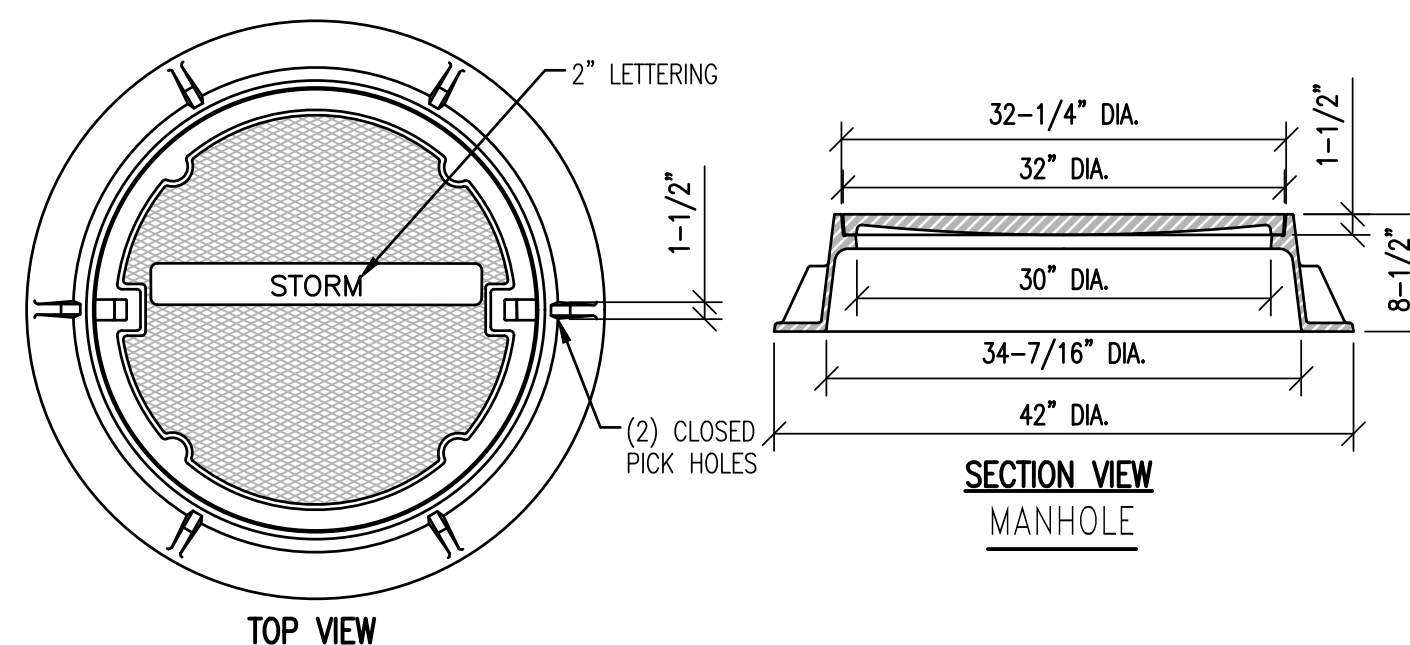
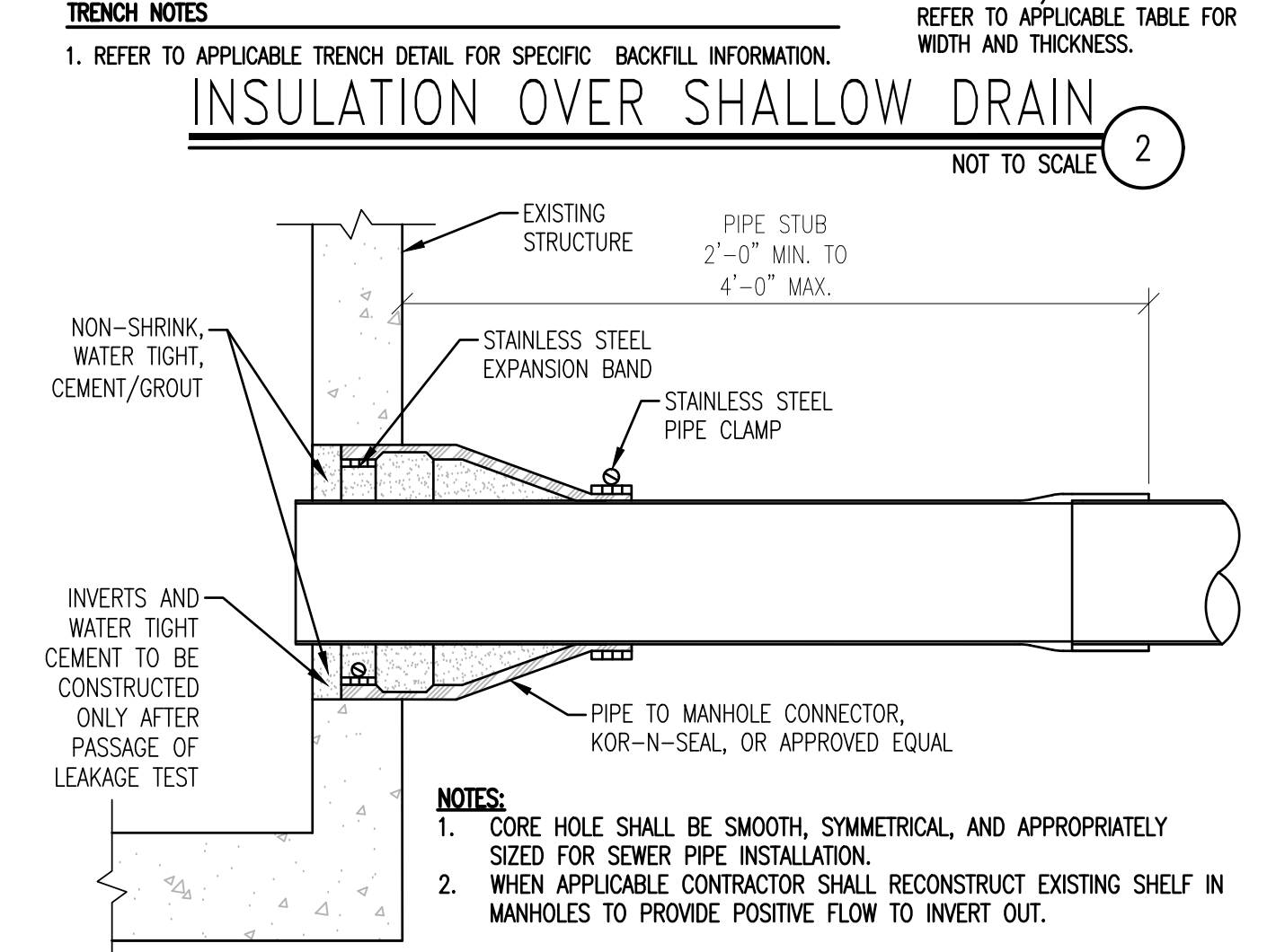
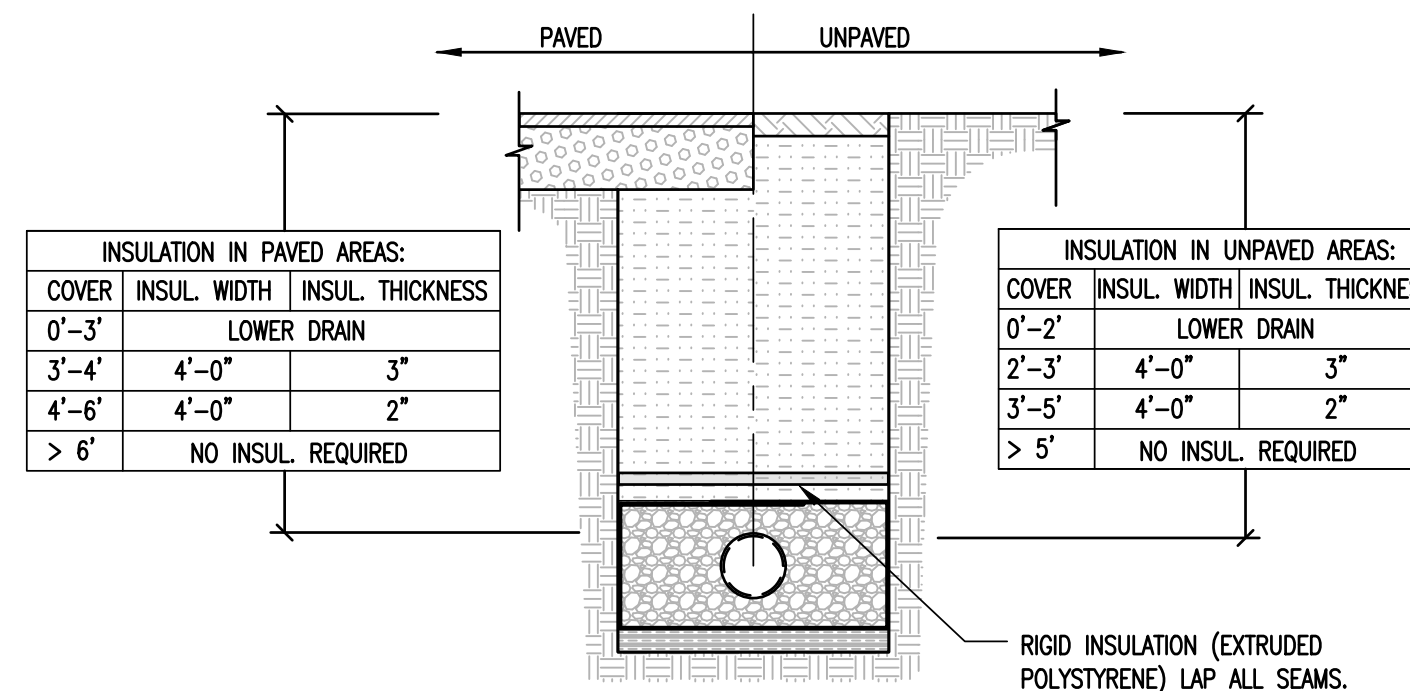
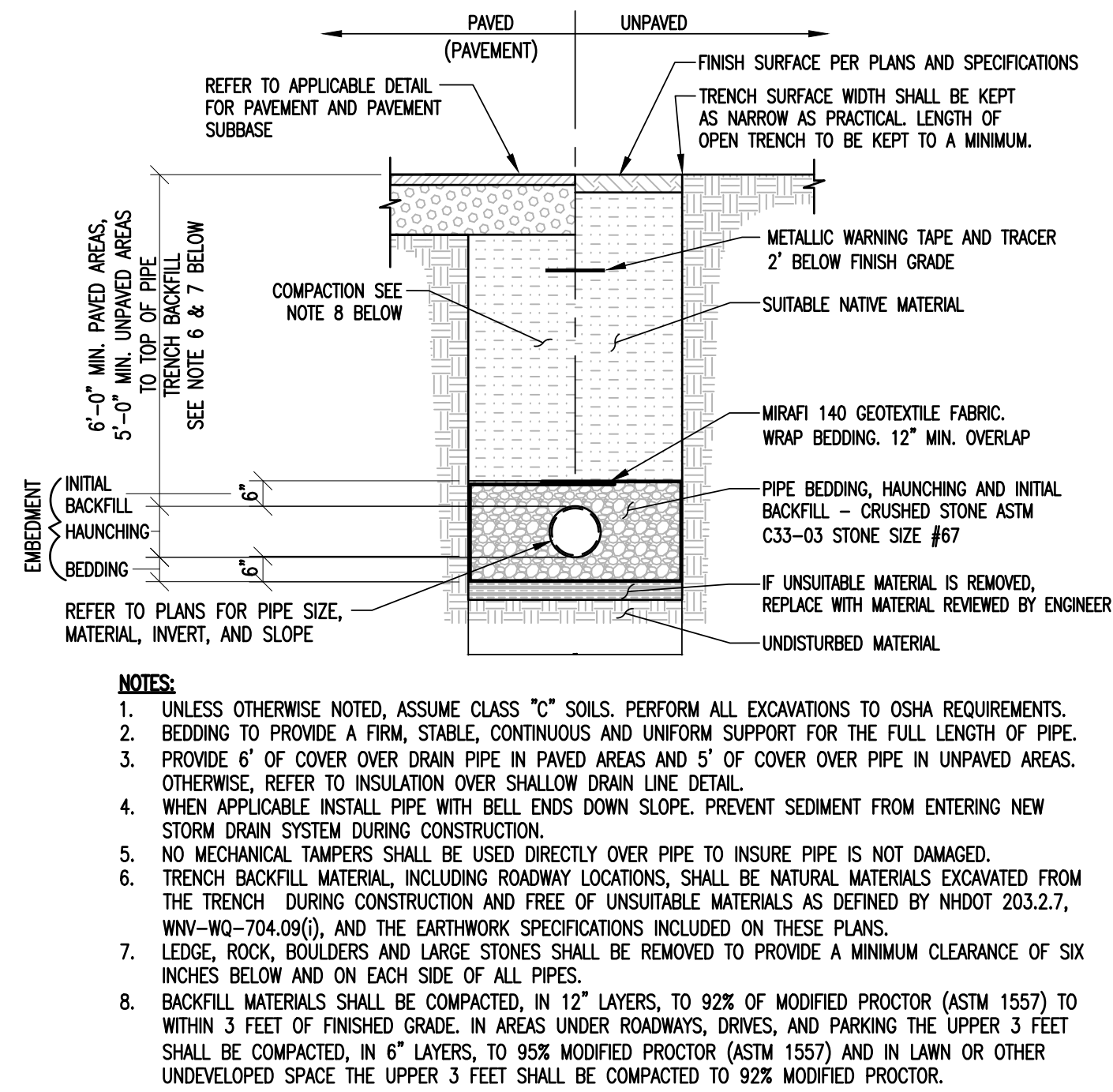
**KUA KILTON/WELCH DORMITORIES**

Main Street,  
Meriden, NH 03770

**WATER DETAILS**

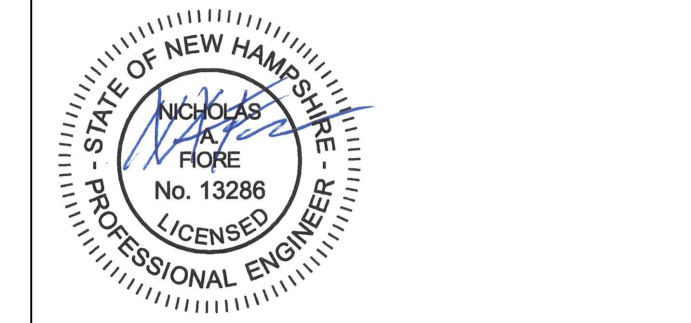
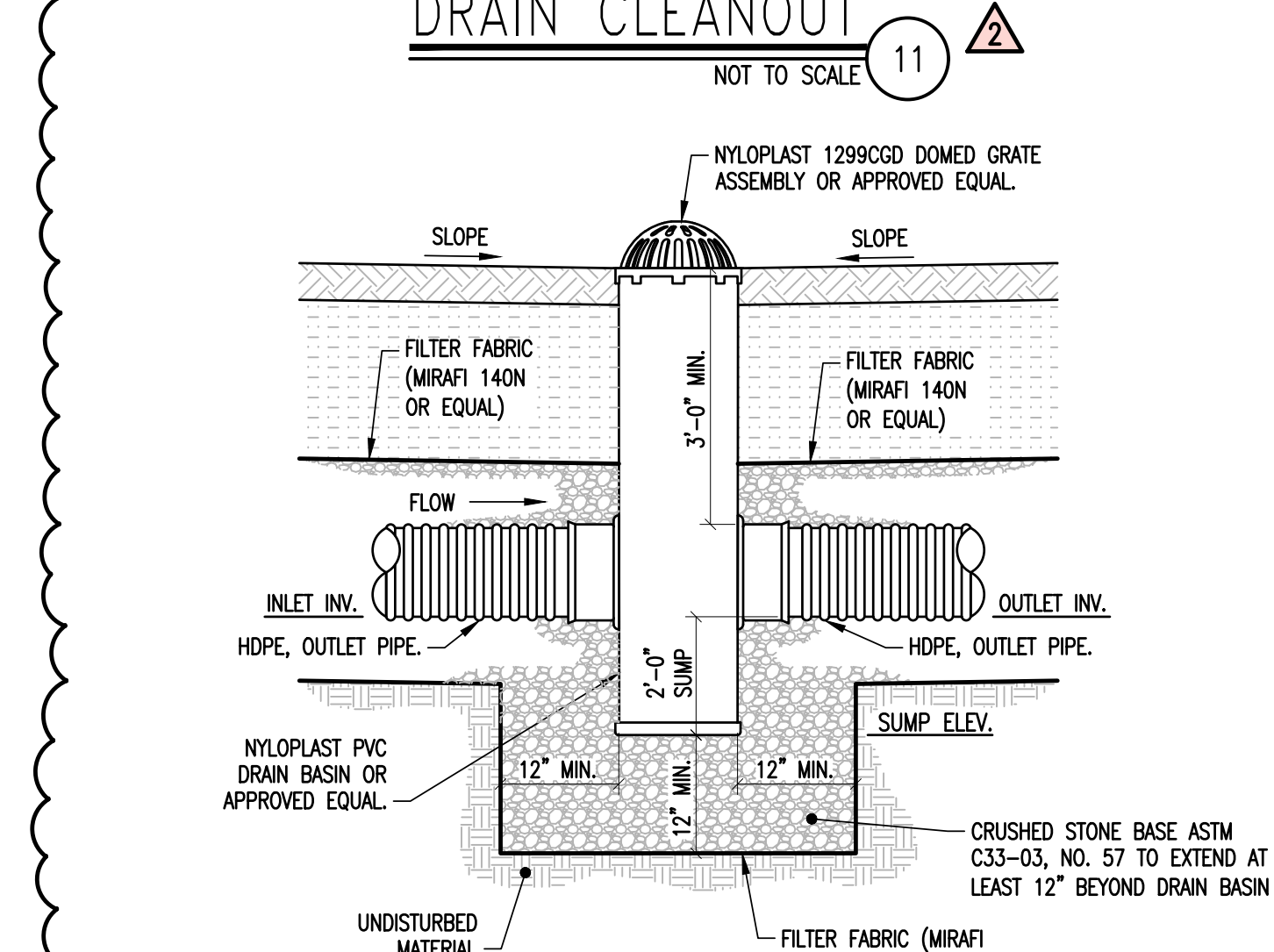
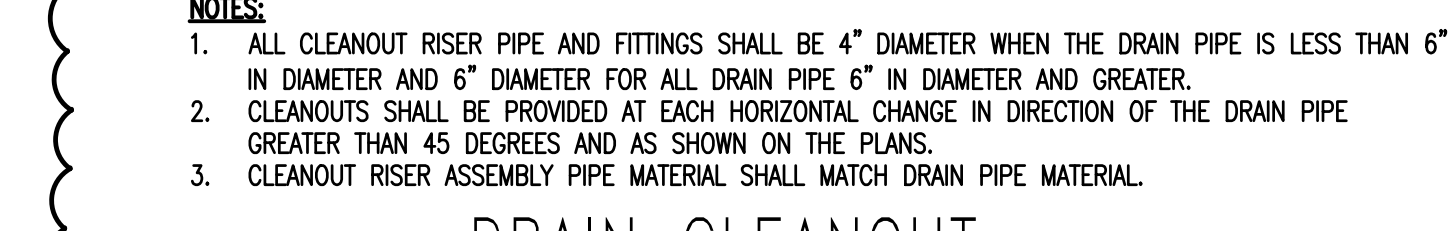
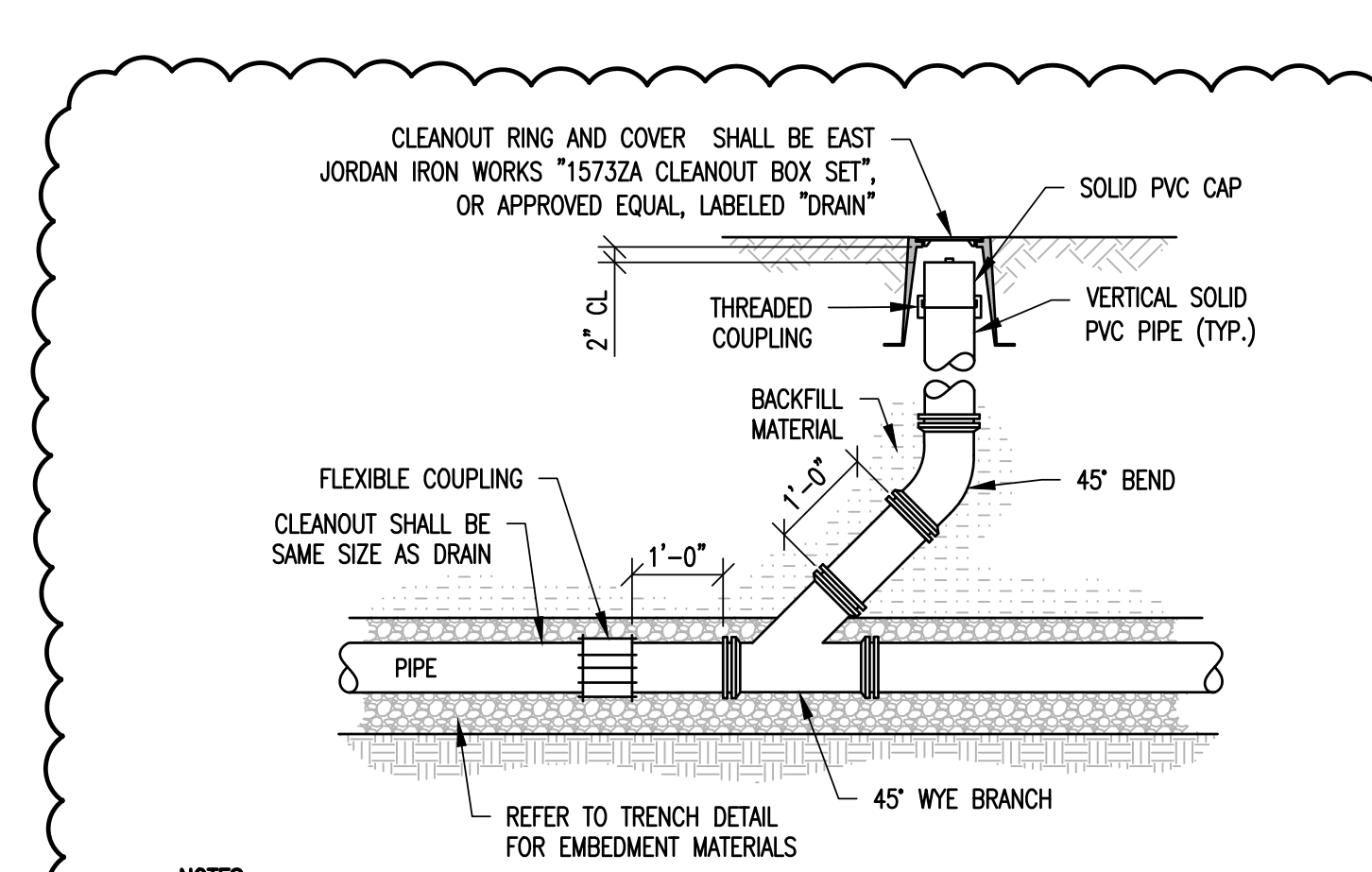
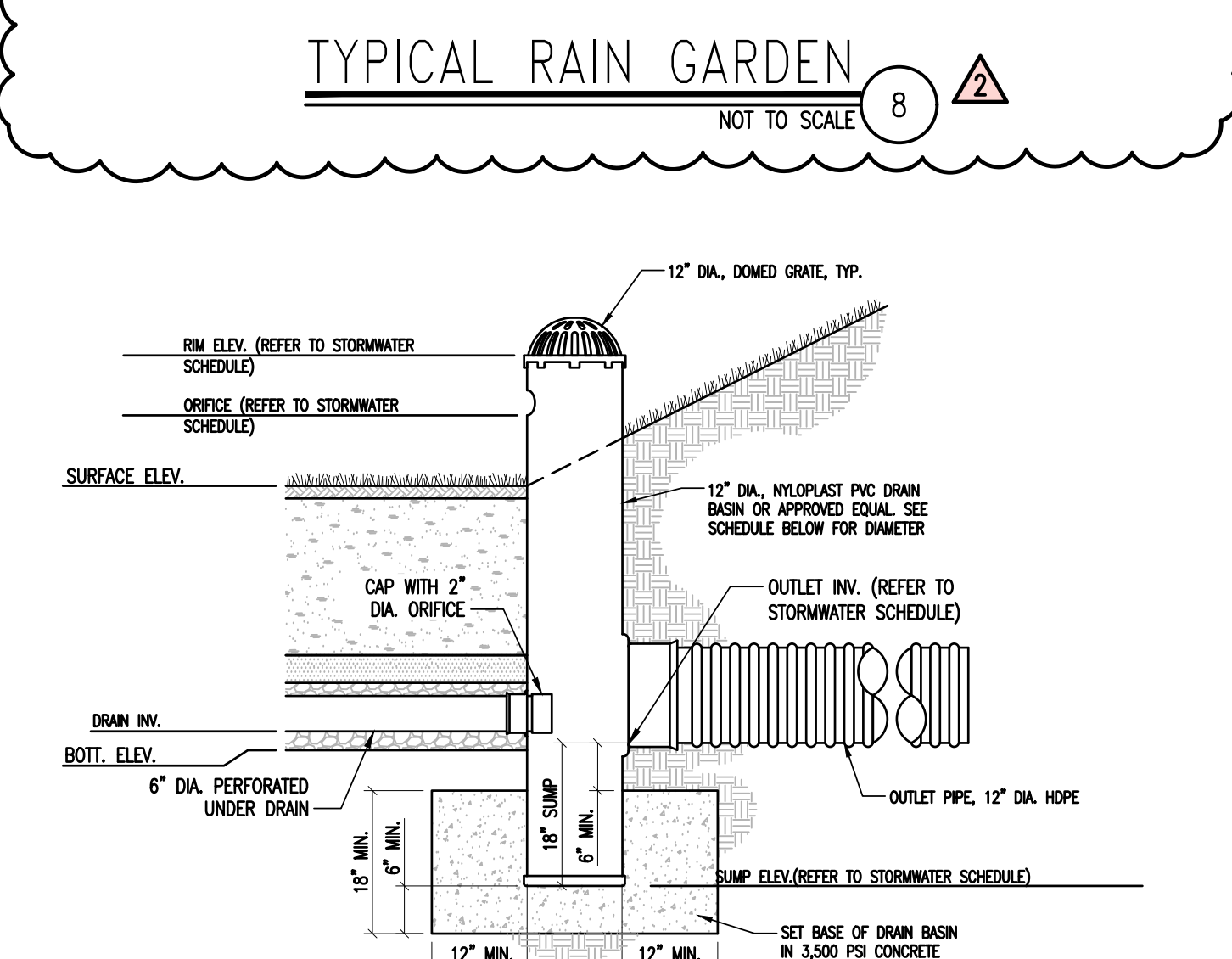
**C4.3**





PARAMETER	SPECIFICATION	MATERIAL SPECIFICATIONS		NOTES
		PERCENT OF MIXTURE BY VOLUME	ORIGINATOR OF MATERIAL	
FILTER MEDIA (24" DEEP)				
	COMPONENT MATERIAL	20% TO 30%	200	<5
	LOAMY COARSE SAND	70% TO 80%	10 20 40 200	85 to 100 70 to 100 15 to 40 8 to 15
PEA GRAVEL	ASTM C33-03		NO. 8 (3/8" TO #8)	
COARSE GRAVEL	ASTM C33-03		NO. 6 (3/4" TO 3/8")	

BARK MULCH SHALL BE MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED.  
USDA SOIL TYPE FOR LOAMY COARSE SAND



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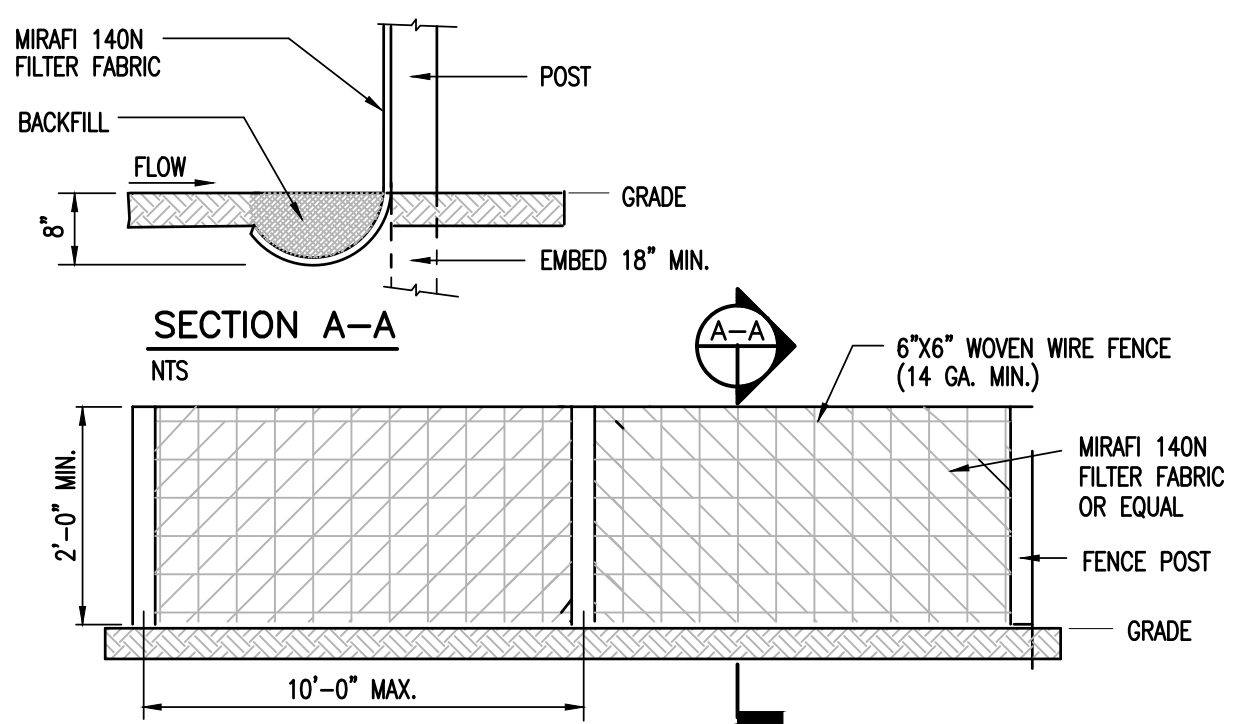
**KUA**  
KILTON/WELCH  
DORMITORIES

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**STORMWATER**  
DETAILS

**C4.4**





**SEEDING SPECIFICATION:**

URBAN MIX GRASS SEED- FOR USE IN GRASSED LAWN AREAS AROUND BUILDING AND PARKING - TEMPORARY AND PERMANENT APPLICATIONS		
% BY WEIGHT	lbs. LIVE SEED BY ACRE	TYPE OF SEED
66.0	40.0	CREeping RED FESCUE
100	60.0 # LIVE SEED/ACRE	KENTUCKY BLUEGRASS

CONSERVATION MIX GRASS SEED- FOR USE IN ALL OTHER AREAS		
% BY WEIGHT	lbs. LIVE SEED PER ACRE	TYPE OF SEED
50	15.0	SMOOTH BROMEGRASS
17	5.0	RYEGRASS
33	10.0	RYEGRASS TREFOIL
100	30.0 # LIVE SEED/ACRE	

**FERTILIZER- 10 lbs. PER 1000S.F. SPRING SEEDING**  
**FALL SEEDING**

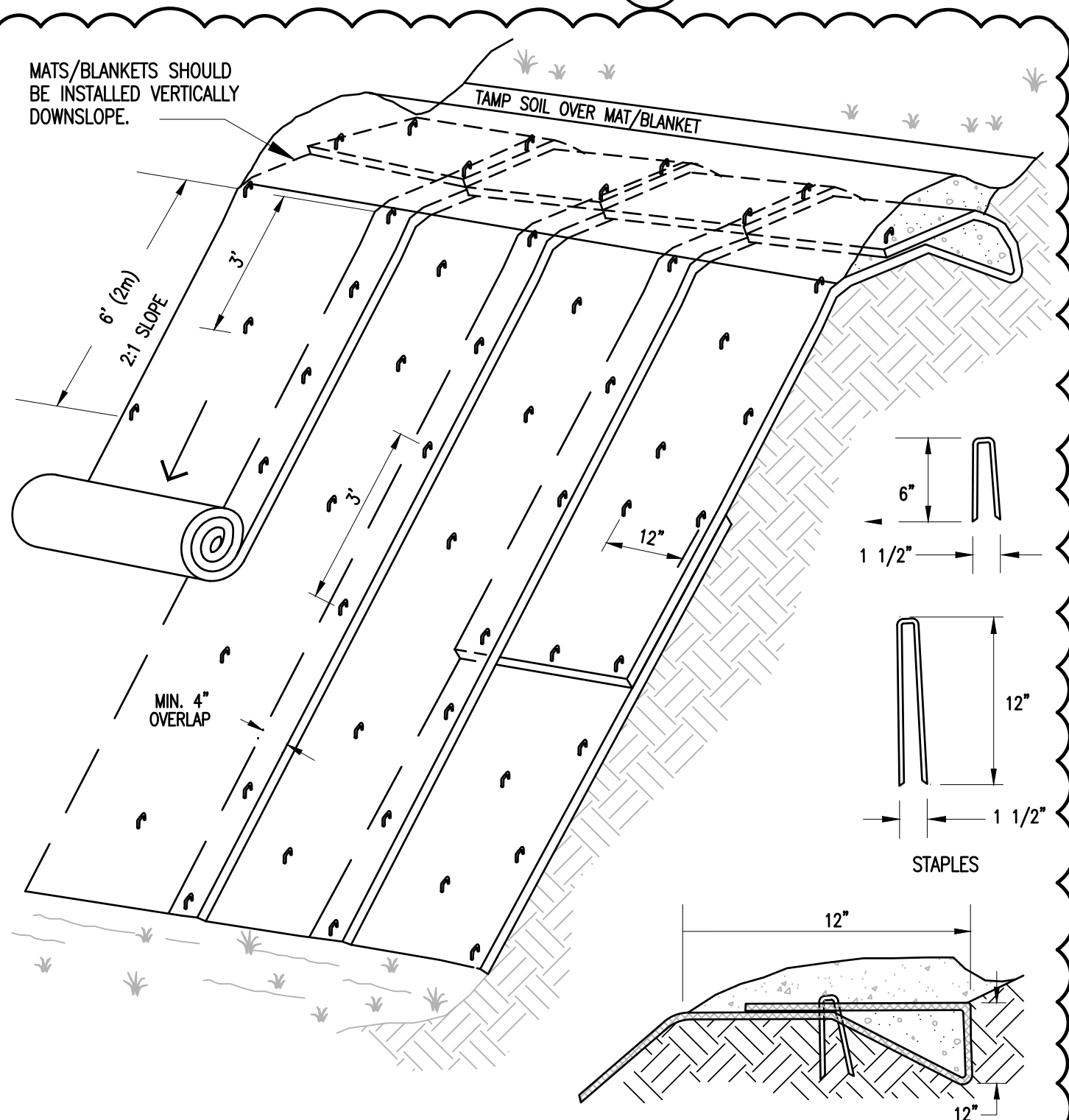
**LIME- 90 lbs. PER 1000S.F. DOLOMITIC GROUND LIMESTONE NOT LESS THAN 85% OF THE TOTAL CARBONATE**

**TOP SOIL**  
 4" MINIMUM APPROVED TOPSOIL

**STRAW MULCH- 2 BALES PER 1000S.F. APPLY BINDER OR NETTING AS NEEDED**

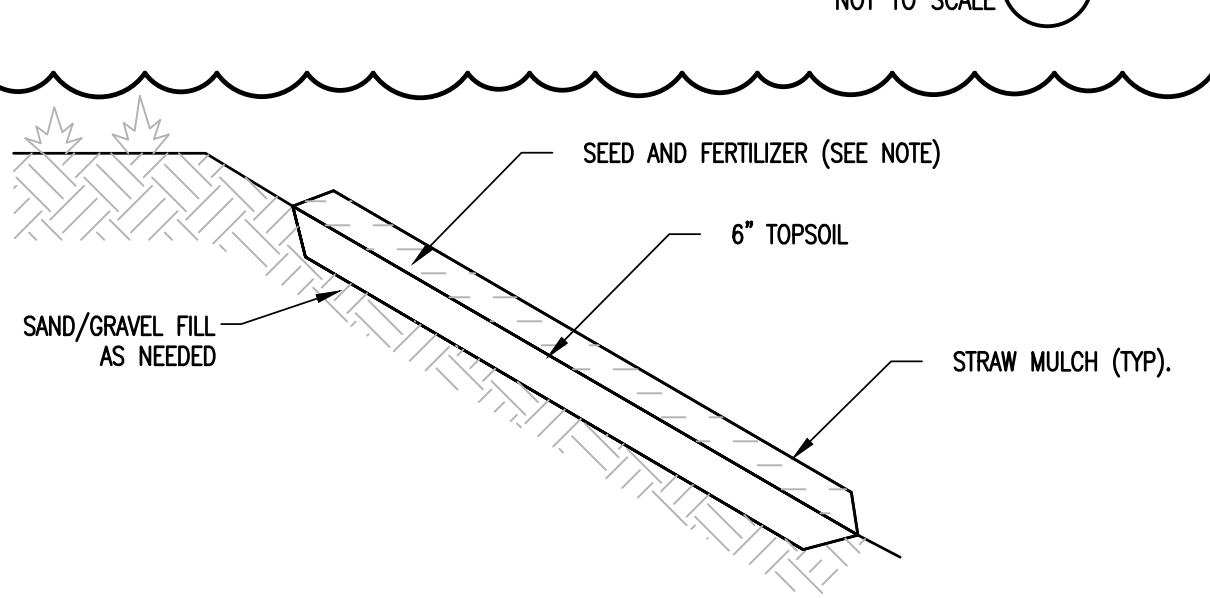
- NOTES:**
- SILT FENCE SHALL BE PRE-FABRICATED EROSION CONTROL FENCE BY MIRAFI OR EQUAL, OR CONSTRUCTED IN PLACE AS SPECIFIED HEREIN.
  - CONSTRUCTED IN PLACE SILT FENCE:
    - WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
    - FILTER FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE TIES SPACED EVERY 24" AT TOP OF MID SECTION.
    - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6", FOLDED AND STAPLED.
  - INSPECTION SHALL BE FREQUENT (MINIMUM ONCE A WEEK AND AFTER EVERY RAINFALL). MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE.

**SILT FENCE**  
NOT TO SCALE 1



- NOTES:**
- EROSION CONTROL BLANKETS SHALL BE ECS-1B 100% BIODEGRADABLE JUTE MAT BY EAST COAST EROSION CONTROL OR EQUAL.
  - SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
  - APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
  - LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
  - THERE SHALL BE NO PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES MATERIAL UTILIZED. (NOT APPLICABLE TO TURF REINFORCEMENT MATS).

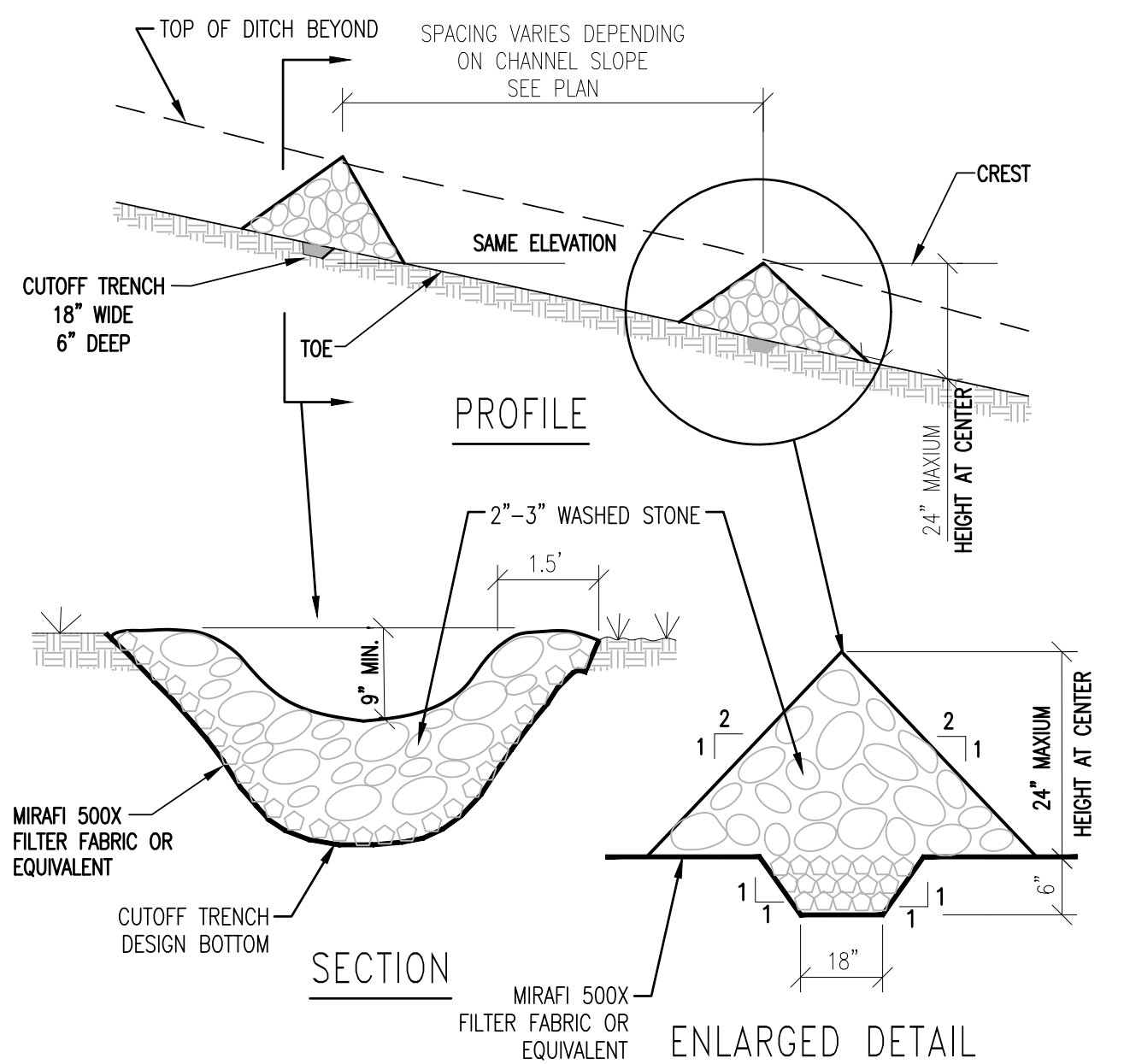
**EROSION CONTROL BLANKET**  
NOT TO SCALE 2



- NOTES:**
- SEEDING AND MULCHING OF DISTURBED AREAS SHALL TAKE PLACE WITHIN 48 HOURS OF FINAL GRADING.
  - MULCH- HAY SHALL NOT BE USED. STRAW MULCH SHALL BE UTILIZED AND SHALL BE APPLIED AT A RATE OF 90-1,000 LBS./1,000 SF. MULCH SHALL NOT BE PLACED ON SLOPES OF GREATER THAN 3:1. SEED IMPREGNATED EROSION CONTROL NETTING SHALL BE USED IN ITS PLACE.
  - SEED: SEEDING SHALL OCCUR AFTER APRIL 15 AND PRIOR TO SEPTEMBER 15TH IN ORDER TO ESTABLISH A STAND OF GRASS PRIOR TO GROUND FREEZING. SEED SHALL BE IN ACCORDANCE WITH SEED SPECIFICATION ON THIS SHEET.
  - COVER SEED WITH 1/2 INCH SOIL UNLESS A HYDROSEEDER IS USED.
  - MULCH ANCHORING: SHALL BE ACCOMPLISHED BY DEGRADABLE MULCH NETTING. USE WHEN SLOPES ARE GREATER THAN 10%.
  - TOPSOIL AND MULCHING NOT TO BE APPLIED IN AREAS OF TRAVEL WAYS.

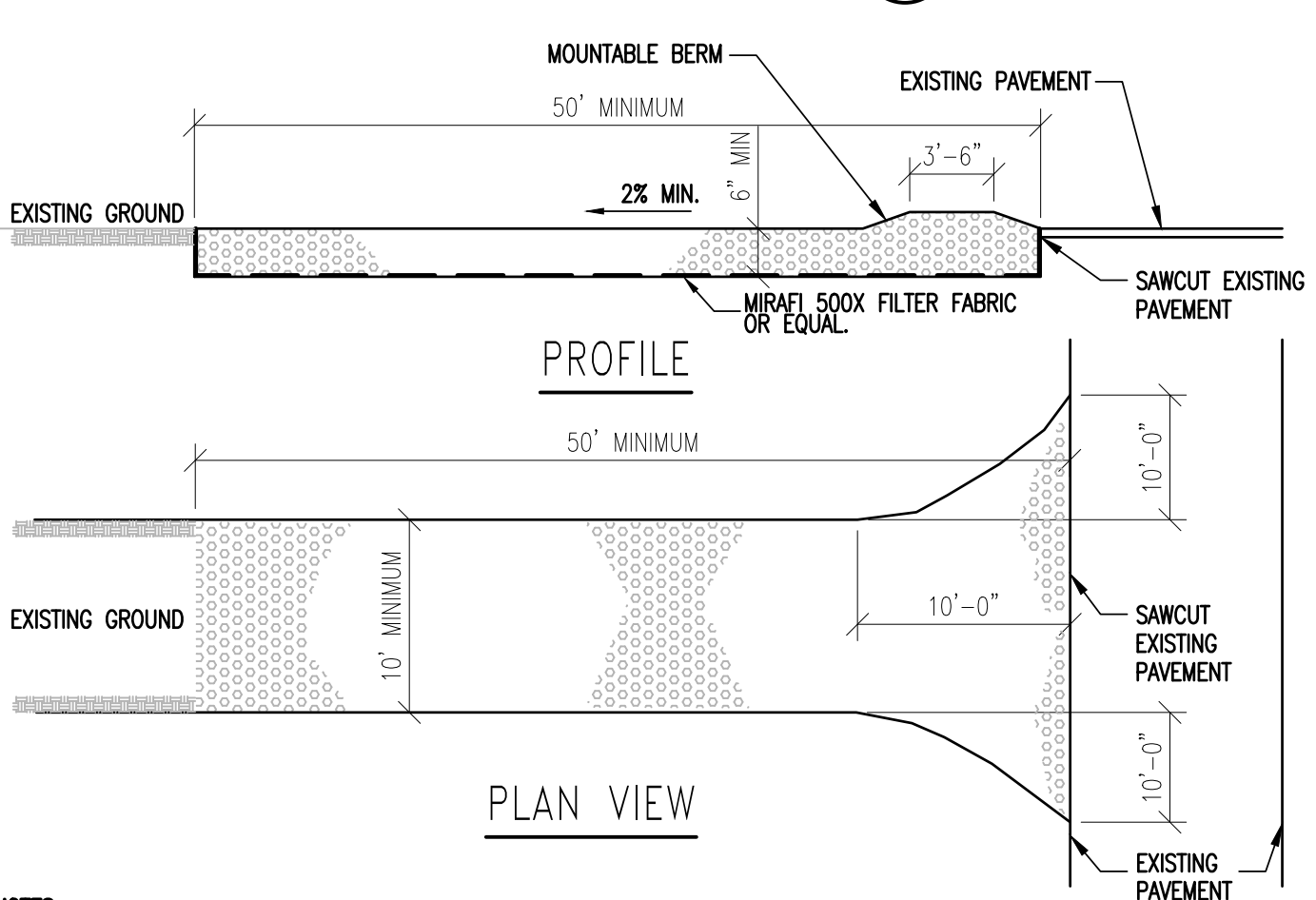
**SEEDED AND MULCHED AREAS**  
NOT TO SCALE 3

**SEED SPECIFICATION**  
NOT TO SCALE 4



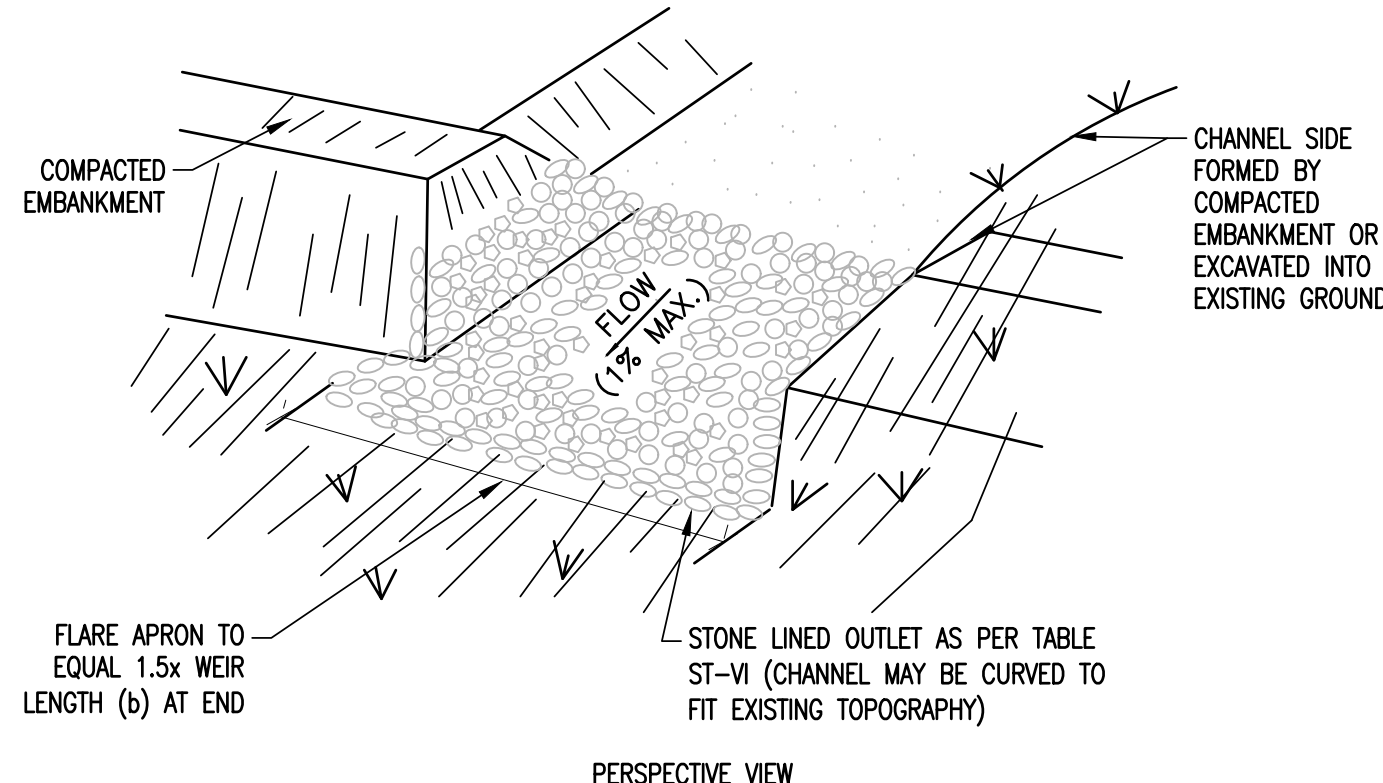
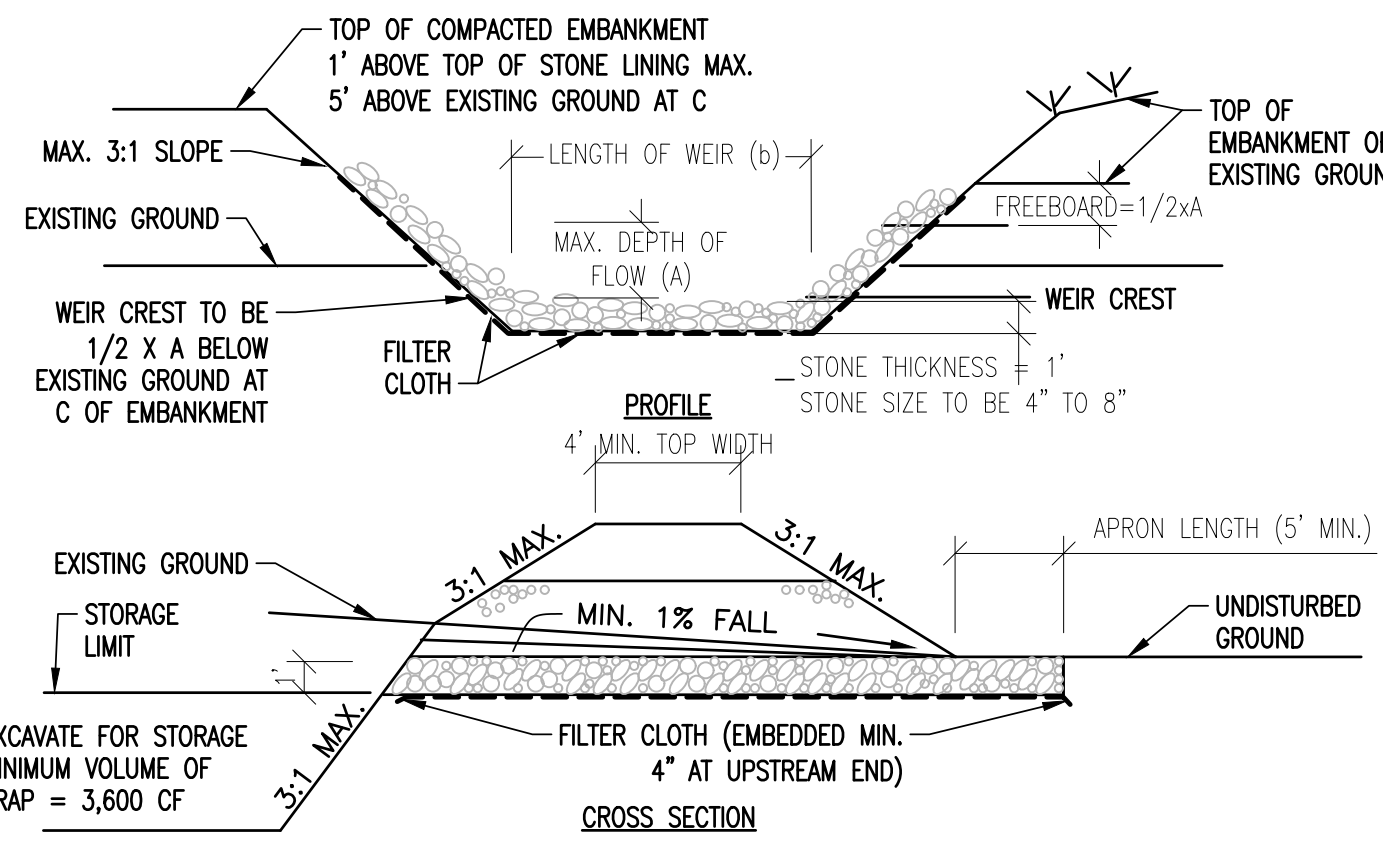
- NOTES:**
- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN PLANS.
  - SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
  - EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
  - PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
  - ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
  - REMOVE ACCUMULATED SEDIMENT BEHIND CHECK DAM WHEN 1/2 THE HEIGHT OF THE DAM. REPLACE STONES AS NECESSARY.

**STONE CHECK DAM**  
NOT TO SCALE 5



- NOTES:**
- STONE SIZE: USE 3" (MIN) CRUSHED STONE.
  - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE.
  - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. REPAIR AND/OR CLEANOUT ANY MEASURES USED TO TRAP SEDIMENT. TRACKING ONTO PUBLIC RIGHT-OF-WAYS SHALL NOT BE ALLOWED. ALL SEDIMENT SPILLED, DROPPED, OR WASHED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY AND ANY WASH WATER MUST BE CONTAINED AND PROPERLY DISPOSED OF.
  - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
  - WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

**STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE 6



- NOTES:**
- THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE;
  - THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN 5 ACRES;
  - THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA;
  - THE SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER, AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION;
  - THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA;
  - THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED;
  - AND THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.
  - THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
  - THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE FIVE (5) FEET, MEASURED AT CENTERLINE OF EMBANKMENT.
  - ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF EMBANKMENT.
  - FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTIONS OF FABRIC MUST OVERLAP AT LEAST ONE (1) FOOT WITH SECTION NEAREST ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
  - STONE USED IN THE OUTLET CHANNEL SHALL BE FOUR (4) TO EIGHT (8) INCH RIPRAP. TO PROVIDE A FILTERING EFFECT, A LAYER OF FILTER CLOTH SHALL BE EMBEDDED ONE (1) FOOT WITH SECTION NEAREST ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
  - THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
  - CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
  - THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

**SEDIMENT TRAP**  
NOT TO SCALE 7

**EROSION CONTROL NOTES**

- WINTER EROSION CONTROL NOTES**
- TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE ADDITIONAL STABILIZATION TECHNIQUES SPECIFIED IN THIS SECTION SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1.
  - THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO ONE ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. THE ALLOWABLE AREA OF EXPOSED SOIL WILL BE INCREASED IF A WINTER CONSTRUCTION PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, IS REVIEWED AND APPROVED BY NHDES.
  - ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
  - ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
  - AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
  - ALL PROPOSED STABILIZATION IN ACCORDANCE WITH THE ABOVE SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.

- GENERAL EROSION CONTROL NOTES**
- THE "ON-SITE EROSION CONTROL PLAN COORDINATOR" SHALL BE THE GENERAL CONTRACTOR. THIS INDIVIDUAL SHALL BE PRESENT ON-SITE FROM DAY-TO-DAY, AND SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL MEASURES REQUIRED BY THE EROSION CONTROL PLAN, DETAILS AND NOTES, ARE PROPERLY INSTALLED AND MAINTAINED. THE ON-SITE EROSION CONTROL PLAN COORDINATOR SHALL KEEP A WRITTEN RECORD OF INSPECTIONS AND MAINTENANCE OF EROSION CONTROL FEATURES. A COPY OF THESE PLANS AND INSPECTION/MAINTENANCE RECORDS SHALL BE KEPT ON-SITE AT ALL TIMES.
  - THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS DISTURBED, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE OWNER'S REP.
  - DUST SHALL BE CONTROLLED WITH WATER DISTRIBUTED BY A TRUCK MOUNTED SPRAY BAR. CALCIUM CHLORIDE (ASHOTO M 144) OR SODIUM CHLORIDE (ASHOTO M 143) SHALL BE USED AS DIRECTED BY THE OWNER'S REP.
  - ALL EROSION AND STORMWATER CONTROL SYSTEMS SHALL BE INSPECTED EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE OCCURRENCE OF A STORM EVENT OF 0.5" OR GREATER. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED AS THEY ACCUMULATE AND PLACED IN AREAS WHERE FURTHER EROSION IS UNLIKELY.
  - A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, SHALL BE SUBMITTED TO THE NHDES WITHIN 24 HOURS OF EACH INSPECTION THAT:
    - DESCRIBES THE PROGRESS OF THE PROJECT, INCLUDING WHETHER ALL CONDITIONS OF THE PERMIT ARE BEING MET AND, IF NOT, WHICH REQUIREMENTS ARE NOT BEING MET;
    - IF ANY REQUIREMENTS ARE NOT BEING MET, AN EXPLANATION OF THE CORRECTIVE ACTION(S) THAT WILL BE OR ARE BEING TAKEN TO BRING THE PROJECT INTO COMPLIANCE WITH APPLICABLE REQUIREMENTS AND THE DEADLINE BY WHICH SUCH ACTIONS WILL BE COMPLETED; AND
    - INCLUDES PHOTOGRAPHS OF THE SITE THAT ARE REPRESENTATIVE OF THE PROJECT; AND
  - RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (5), ABOVE, ON-SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL, STATE, AND LOCAL OFFICIALS.
  - ALL PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
  - DETENTION BASINS AND SWALES SHALL BE INSTALLED PRIOR TO ROUGH GRADING THE SITE.
  - ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
  - ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
  - ALL CUT AND FILL SLOPES SHALL BE SEED/LOADED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
  - AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL, SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
    - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
  - LOT DISTURBANCE OTHER THAN THAT SHOWN ON THE APPROVED PLANS SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.
  - APPROPRIATE SILTATION/EROSION/TURBIDITY CONTROLS SHALL BE IN PLACE PRIOR TO CONSTRUCTION, SHALL BE MAINTAINED DURING CONSTRUCTION, AND REMAIN IN PLACE UNTIL THE AREA IS STABILIZED. SILT FENCE(S) MUST BE REMOVED ONCE THE AREA IS STABILIZED.
  - DISCHARGE FROM Dewatering OF WORK AREAS SHALL BE TO SEDIMENT BASINS THAT ARE:
    - LOCATED IN UPLANDS;
    - LINED WITH HAY BALES OR OTHER ACCEPTABLE SEDIMENT TRAPPING LINERS;
    - SET BACK AS FAR AS POSSIBLE FROM WETLANDS AND SURFACE WATERS, IN ALL CASES WITH A MINIMUM OF 20 FEET OF UNDISTURBED VEGETATED BUFFER.
  - WITHIN THREE DAYS OF FINAL GRADING, ALL EXPOSED SOIL AREAS SHALL BE STABILIZED BY SEEDING AND MULCHING DURING THE GROWING SEASON, OR IF NOT WITHIN THE GROWING SEASON, BY MULCHING WITH TACK OR NETTING AND PINNING ON SLOPES STEEPER THAN 3:1.
  - WHERE CONSTRUCTION ACTIVITIES HAVE BEEN TEMPORARILY SUSPENDED WITHIN THE GROWING SEASON, ALL EXPOSED SOIL AREAS SHALL BE STABILIZED WITHIN 14 DAYS BY SEEDING AND MULCHING.
  - WHERE CONSTRUCTION ACTIVITIES HAVE BEEN TEMPORARILY SUSPENDED OUTSIDE THE GROWING SEASON, ALL EXPOSED AREAS SHALL BE STABILIZED WITHIN 14 DAYS BY MULCHING AND TACK. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED BY MATING AND PINNING.
  - PROPER HEADWALLS SHALL BE CONSTRUCTED WITHIN SEVEN DAYS OF CULVERT INSTALLATION.
  - CULVERT OUTLETS SHALL BE PROTECTED IN ACCORDANCE WITH THE DES BEST MANAGEMENT PRACTICES FOR URBAN STORMWATER RUNOFF MANUAL (JANUARY 1996) AND THE STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE (AUGUST 1992).
  - THE CONTRACTOR RESPONSIBLE FOR COMPLETION OF THE WORK SHALL UTILIZE TECHNIQUES DESCRIBED IN THE NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION (DECEMBER 2008).
  - DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL ALL BMPs HAVE BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
  - DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM THE CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
  - DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

- EROSION CONTROL CONSTRUCTION SEQUENCE:**
- THE "ON-SITE EROSION CONTROL PLAN COORDINATOR" SHALL BE THE GENERAL CONTRACTOR, THIS INDIVIDUAL SHALL BE PRESENT ON SITE FROM DAY TO DAY, AND SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL MEASURES REQUIRED BY THE EROSION CONTROL PLAN, DETAILS AND NOTES, ARE PROPERLY INSTALLED AND MAINTAINED. THE ON-SITE EROSION CONTROL PLAN COORDINATOR SHALL KEEP A WRITTEN RECORD OF INSPECTIONS AND MAINTENANCE OF EROSION CONTROL FEATURES. A COPY OF THESE PLANS AND INSPECTION/MAINTENANCE RECORDS SHALL BE KEPT ON-SITE AT ALL TIMES.
  - HOLD PRE-CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION, WITH THE CONTRACTOR, OWNER, AND ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL EROSION CONTROL MEASURES DELINEATED ON THE PLANS AND ANY ADDITIONAL MEASURES THAT ARE NECESSARY TO MINIMIZE EROSION. THE CONTRACTOR SHALL HAVE EROSION CONTROL MATERIALS AND INSTALLATION EQUIPMENT ON SITE AT ALL TIMES.
  - IF POSSIBLE, ALL TEMPORARY EROSION CONTROL MEASURES REQUIRED FOR WORK PROPOSED DURING THE WINTER (BETWEEN OCTOBER 15 AND MAY 1), SHALL BE INSTALLED PRIOR TO OCTOBER 1.
  - PRIOR TO ANY OTHER WORK, SILT FENCES SHALL BE INSTALLED GENERALLY 10 FEET FROM THE BASE OF THE FILL SLOPES, OR AS SHOWN ON THE EROSION CONTROL PLAN. THESE SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES 6 INCHES DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A PROPER SEDIMENT BARRIER.
  - INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT.
  - INSTALL INLET PROTECTION ON EXISTING AND NEW CATCH BASINS.
  - ROUGH GRADE AND STOCKPILE TOPSOIL SURROUNDED BY SILT FENCE.
  - STABILIZE EXPOSED SLOPES AND SOILS AS SOON AS GRADED, AND MAINTAIN UNTIL ADEQUATELY VEGETATED.
  - COMPLETE FINAL GRADING OF SITE. PLACE TOPSOIL AND PERMANENTLY VEGETATE, LANDSCAPE, AND MULCH.
  - AFTER THE SITE IS APPROVED BY THE ENGINEER AS ADEQUATELY STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS.

- TEMPORARY/CONSTRUCTION EROSION CONTROL MEASURES:**
- HAY SHALL NOT BE USED.
  - SILT FENCES SHALL BE INSTALLED GENERALLY 10 FEET FROM THE BASE OF THE FILL SLOPES, OR AS SHOWN ON THE PLANS. THESE SHALL REMAIN IN PLACE UNTIL THE PROJECT SITE HAS BEEN STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES 6 INCHES DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A PROPER SEDIMENT BARRIER.
  - INSTALL STONE CHECK DAMS IN GRASS-LINED SWALES 50 FEET ON CENTER TO PREVENT SILT FROM WASHING INTO THE DRAINAGE SYSTEM DURING CONSTRUCTION. SEDIMENT SHALL BE REMOVED FROM BEHIND THE DAMS WHEN IT BECOMES 6 INCHES DEEP. STONE CHECK DAMS SHALL BE REMOVED WHEN VEGETATION IS ESTABLISHED.
  - DROP INLET PROTECTION SHALL BE PROVIDED AROUND ALL EXISTING AND PROPOSED CATCH BASINS. PROTECTION SHALL REMAIN UNTIL ALL DISTURBED AREAS ARE STABILIZED. SEDIMENT SHALL BE REMOVED FROM DROP INLET PROTECTION WHEN THE STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN IT NO LONGER DRAINS PROPERLY.
  - EXCAVATED MATERIAL FROM EARTH EXCAVATION AND DITCH DIGGING SHALL BE DISPOSED OF OFFSITE OR USED FOR PROJECT FILL MATERIAL IF DETERMINED SUITABLE BY THE OWNER'S REPRESENTATIVE.
  - STOCKPILED MATERIAL (TOPSOIL, BORROW, ETC) SHALL HAVE SILT FENCE CONSTRUCTED AROUND THE PERIMETER. THE STOCKPILED MATERIAL SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO PREVENT SOIL EROSION AND SEDIMENTATION OFF SITE. LOCATE STOCKPILES ON THE UPHILL SIDE OF DISTURBED AREAS, IF POSSIBLE. DURING WINDY CONDITIONS, STOCKPILED MATERIAL SHALL BE COVERED OR WATERED APPROPRIATELY TO PREVENT WIND EROSION.

- PERMANENT EROSION CONTROL MEASURES:**
- GRASS LINED SWALES SHALL BE TOP SOILED, SODDED AND FERTILIZED AREAS WHICH EXHIBIT SIGNS OF EROSION SHALL BE RE-SODDED IMMEDIATELY AND MAINTAINED UNTIL SOD HAS PERMANENT HOLD AND IS HEALTHY.
  - WHEN CONSTRUCTION IS COMPLETED IN AN AREA, IT SHALL BE IMMEDIATELY TOP SOILED, SEEDED, FERTILIZED AND MULCHED.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUED MAINTENANCE OF ALL DISTURBED AREAS, INCLUDING WATERING, UNTIL THE AREA IS INSPECTED AND ACCEPTED BY THE OWNER OR ENGINEER.
  - AFTER THE SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS.
  - RE-SEEDING SHALL BE DONE UNTIL ALL AREAS ARE COMPLETELY COVERED WITH A MATURE STRAND OF GRASS. AN AREA SHALL BE CONSIDERED COVERED WHEN THE ENTIRE SURFACE CONTAINS A VERDUROUS STAND OF GRASS. AREAS THAT, IN THE OPINION OF THE ENGINEER, ARE PREDOMINATELY WEEDS SHALL BE PLOWED UP, FINE GRADED, FERTILIZED AND RE-SEEDING IN THE MANNER SPECIFIED PREVIOUSLY, EXERCISING CAUTION NOT TO CAUSE DAMAGE TO NEW OR EXISTING PLANT MATERIAL.



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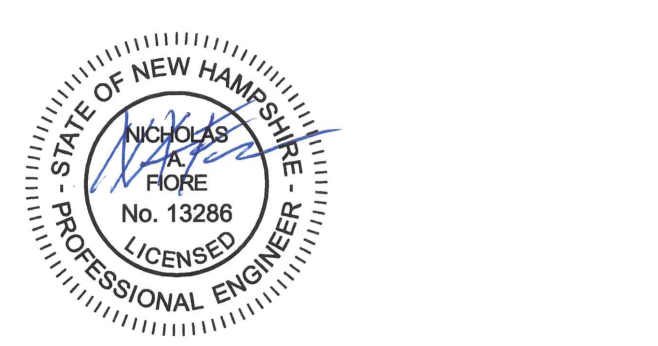
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**REVISIONS:**

#	Date	Description
1	05.15.2023	SCOPE CHANGES TO BID SET #1



PERMIT SET 05/15/2023

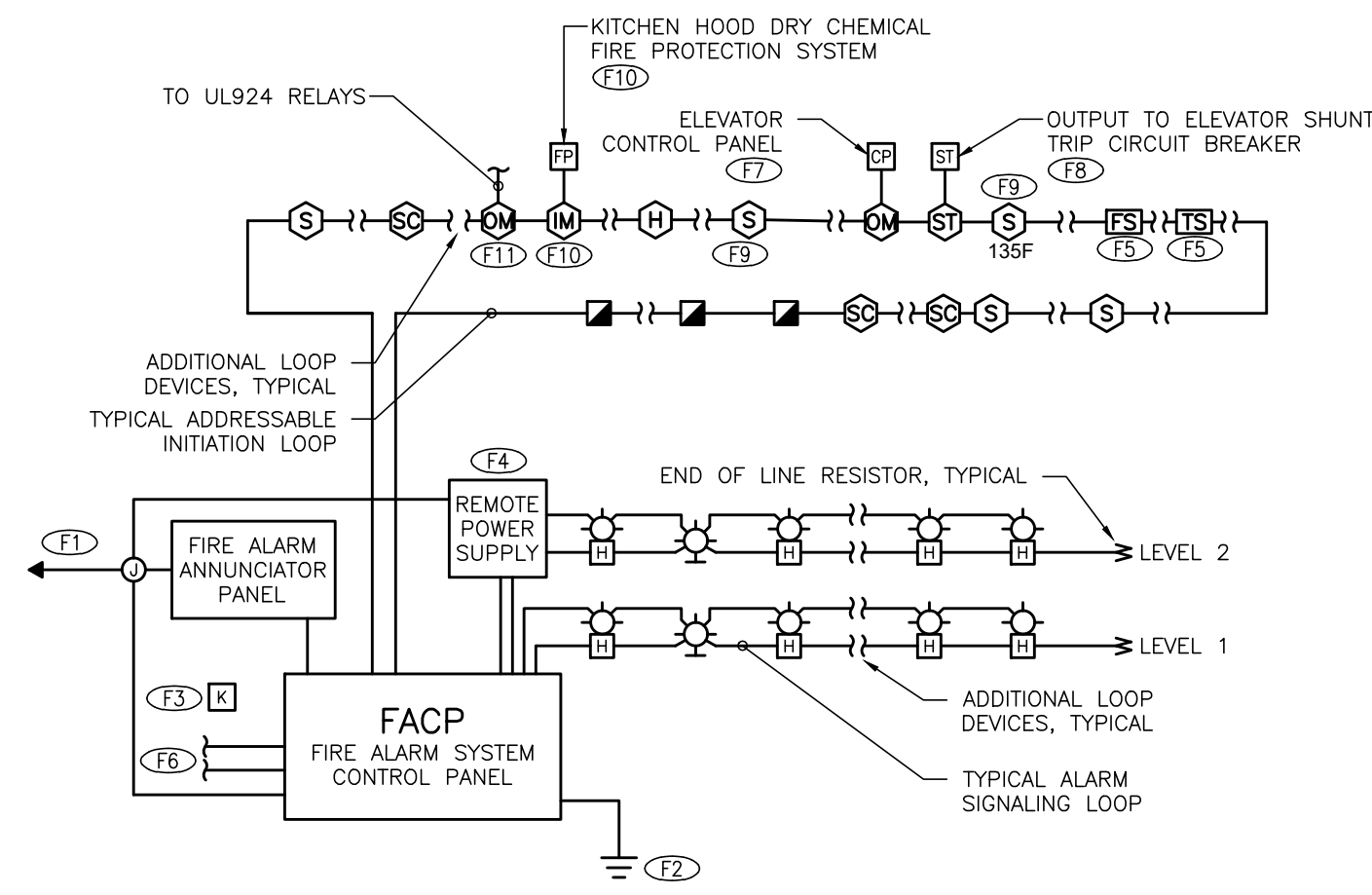
KUA  
KILTON/WELCH  
DORMITORIES

Main Street,  
Meriden, NH 03770

EROSION CONTROL  
DETAILS

C4.5





**FIRE ALARM SYSTEM RISER DIAGRAM**

NO SCALE

**FIRE RISER GENERAL NOTES:**

- COORDINATE FIRE ALARM SYSTEM DESIGN AND INSTALLATION WITH THE MUNICIPAL FIRE DEPARTMENT; SUBMIT SUBMITAL DOCUMENTATION FOR THEIR REVIEW PRIOR TO ANY INSTALLATION.
- FIRE ALARM SYSTEM SHALL MEET ALL VERMONT STATE CODE REQUIREMENTS. DEVICE INSTALLATION HEIGHTS AND SIGNAL COVERAGE SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA).
- LOCATE FIRE ALARM EQUIPMENT AND DEVICES, GENERALLY, AS FOLLOWS:
  - MANUAL PULLSTATIONS: 48" AFF
  - VISUAL SIGNALS (STROBES): 84" AFF
  - REMOTE TEST STATIONS: 54" AFF
  - FIRE ALARM PANEL: 72" AFF TO TOP
  - REFER TO SPECIFICATIONS FOR ADDITIONAL RELATED INFORMATION.
- INSTALLED FIRE ALARM SYSTEM SHALL BE ACCEPTANCE TESTED AS PER THE REQUIREMENTS OF NFPA 72, "INSPECTIONS, TESTING AND MAINTENANCE". INCLUDE THE COMPLETED "INSPECTION AND TESTING FORM" WITH THE OPERATION AND MAINTENANCE MANUALS THAT ARE ULTIMATELY PRESENTED TO THE OWNER.
- PROVIDE FIRE ALARM SYSTEM INITIATION AND SIGNALING LOOP WIRING USING UL LISTED FIRE ALARM CABLE. SIZE CABLES APPROPRIATE FOR LOAD AND VOLTAGE DROP OF WIRING LOOPS. CABLING SHALL BE RUN WITHOUT RACEWAY WHERE CONCEALED IN WALLS OR ABOVE CEILINGS OR WHERE RUN IN EXPOSED ROOF STRUCTURE. PROVIDE RACEWAY WHERE RUN EXPOSED VERTICALLY ON WALLS OF SERVICE LEVEL TO MATCH RACEWAY UTILIZED FOR POWER WIRING.
- PROVIDE RED BOXES/COVERS FOR FIRE ALARM SYSTEM.
- DORMITORY ROOMS: UPON A SMOKE DETECTOR LOCATED IN A DORM ROOM SENSING SMOKE, THE SIGNALING DEVICE IN THAT ROOM SHALL OPERATE (ONLY THAT DEVICE SHALL ALARM) AND CAUSE A TROUBLE SIGNAL AT THE FIRE ALARM SYSTEM. THE DORMITORY SMOKE DETECTORS SHALL OPERATE IN THE SAME/SIMILAR FASHION AS A SINGLE STATION DETECTOR EVEN THOUGH IT IS A SYSTEM DETECTOR.
- FACULTY RESIDENCES: UPON A SMOKE OR SMOKE/CO DETECTOR LOCATED IN A FACULTY RESIDENCE SENSING SMOKE OR CO, ALL SIGNALING DEVICES IN THAT RESIDENCE SHALL OPERATE AND CAUSE A TROUBLE SIGNAL AT THE BUILDING FIRE ALARM SYSTEM. THE FACULTY RESIDENCE SMOKE AND SMOKE/CO DETECTORS SHALL OPERATE IN THE SAME/SIMILAR FASHION AS MULTIPLE STATION DETECTORS EVEN THOUGH THEY ARE SYSTEM DETECTORS.

**FIRE RISER DRAWING NOTES:**

- PROVIDE A 20A1P, 120VAC CIRCUIT TO THIS EQUIPMENT. PROVIDE A LOCK-ON CLIP FOR THE CIRCUIT BREAKER.
- PROVIDE #4 AWG GROUND WIRE TO AN ELECTRICAL SYSTEM GROUNDING ELECTRODE.
- PROVIDE A REMOTE POWER SUPPLIES (NAC, SNAC, ETC.) AS NECESSARY TO SUPPORT POWERING OF ALARM SIGNALS THROUGHOUT THE FACILITY. THE REMOTE POWER SUPPLY IS NOT INDICATED ON PLANS; LOCATE IN A NON-PUBLIC SPACE AND INDICATE LOCATION ON SHOP DRAWINGS. PROVIDE SMOKE DETECTOR ABOVE WHERE PANEL IS LOCATED.
- COORDINATE THE FINAL LOCATION AND QUANTITY OF SPRINKLER SYSTEM FLOW SWITCHES, TAMPER SWITCHES, ETC. WITH THE FINAL FIRE ALARM AND SPRINKLER SHOP DRAWINGS PRIOR TO INSTALLATION. COORDINATE CONNECTIONS WITH SPRINKLER SYSTEM CONTRACTOR.
- PROVIDE CONNECTION TO TWO TELEPHONE LINES FOR PROPER OPERATION OF FIRE ALARM PANEL DIGITAL DIALER AS PRIMARY COMMUNICATION FOR TRANSMITTING OF ALARM CONDITIONS OFF-SITE TO EITHER CENTRALLY MANNED STATION OR TO THE MUNICIPAL FIRE DEPARTMENT.
- PROVIDE OUTPUT MODULES TO SEND SIGNAL TO ELEVATOR TO INITIATE RECALL UPON ALARM SIGNAL FROM HEAT OR SMOKE DETECTORS IN ELEVATOR MACHINE ROOM, SHAFT OR ELEVATOR LOBBIES.
- PROVIDE OUTPUT MODULES TO SEND SIGNAL TO ELEVATOR SHUNT TRIP CIRCUIT BREAKER TO OPEN UPON SIGNAL FROM 135F FIXED TEMPERATURE HEAT DETECTOR AT TOP OF SHAFT.
- COMBINATION SMOKE DETECTOR WITH 135F FIXED TEMPERATURE HEAT DETECTOR AT THE TOP OF SHAFT.
- PROVIDE INPUT MODULE TO MONITOR KITCHEN HOOD FIRE PROTECTION SYSTEM AND SEND SIGNAL FOR ALARM TO THE FIRE ALARM SYSTEM UPON SENSING FIRE AND RELEASING CHEMICAL AGENT.
- PROVIDE OUTPUT MODULES AS NECESSARY FOR SIGNAL TO UL924 RELAYS TO BRING EMERGENCY LIGHTING TO FULL OUTPUT UPON FIRE ALARM GOING INTO ALARM.

**ELECTRICAL LEGEND:**

SEE LUMINAIRE SCHEDULE FOR LUMINAIRE TYPES	SEE LUMINAIRE SCHEDULE FOR LUMINAIRE TYPES
OCUPANCY SENSOR LIGHTING CONTROL DEVICE; REFER TO SCHEDULE	OCUPANCY SENSOR LIGHTING CONTROL DEVICE; REFER TO SCHEDULE
DAYLIGHT SENSOR	DAYLIGHT SENSOR
MANUAL SINGLE POLE LIGHTING SWITCH; 3 = 3 WAY, OC = OCCUPANCY SENSOR, FIR = PASSIVE INFRARED, DT = DUAL TECHNOLOGY, D = DIMMING, LV = LOW VOLTAGE, P = SWITCH WITH PILOT, K = KEYED SWITCH	MANUAL SINGLE POLE LIGHTING SWITCH; 3 = 3 WAY, OC = OCCUPANCY SENSOR, FIR = PASSIVE INFRARED, DT = DUAL TECHNOLOGY, D = DIMMING, LV = LOW VOLTAGE, P = SWITCH WITH PILOT, K = KEYED SWITCH
PHOTOELECTRIC CONTROL SENSOR	PHOTOELECTRIC CONTROL SENSOR
TIMECLOCK CONTROLLER	TIMECLOCK CONTROLLER
ELECTRICAL PANELBOARD	ELECTRICAL PANELBOARD
ELECTRIC METER	ELECTRIC METER
HOMERUN TO PANEL INDICATED	HOMERUN TO PANEL INDICATED
BRANCH CIRCUIT OR FEEDER WIRING	BRANCH CIRCUIT OR FEEDER WIRING
UNDERGROUND WIRING	UNDERGROUND WIRING
SINGLE RECEPTACLE OUTLET	SINGLE RECEPTACLE OUTLET
DUPLEX RECEPTACLE OUTLET	DUPLEX RECEPTACLE OUTLET
DUPLEX RECEPTACLE OUTLET WITH 2 USB PORTS	DUPLEX RECEPTACLE OUTLET WITH 2 USB PORTS
DOUBLE-DUPLEX (QUAD) RECEPTACLE OUTLET	DOUBLE-DUPLEX (QUAD) RECEPTACLE OUTLET
GROUND FAULT PROTECTION RECEPTACLE OUTLET	GROUND FAULT PROTECTION RECEPTACLE OUTLET
SPECIAL OUTLET (AS NOTED ON PLANS)	SPECIAL OUTLET (AS NOTED ON PLANS)
RANGE HOOD CONNECTION	RANGE HOOD CONNECTION
JUNCTION BOX	JUNCTION BOX
CONTROL RELAY	CONTROL RELAY
LINE VOLTAGE THERMOSTAT, 'C' INDICATES COOLING	LINE VOLTAGE THERMOSTAT, 'C' INDICATES COOLING
MOTOR SWITCH	MOTOR SWITCH
SAFETY/DISCONNECT SWITCH; PROVIDE RATINGS AND FUSES AS PER SCHEDULES	SAFETY/DISCONNECT SWITCH; PROVIDE RATINGS AND FUSES AS PER SCHEDULES
MAGNETIC MOTOR STARTER, FULL VOLTAGE, NON-REVERSING	MAGNETIC MOTOR STARTER, FULL VOLTAGE, NON-REVERSING
EQUIPMENT CONTROL PACKAGE; FURNISHED INTEGRAL TO THE EQUIPMENT	EQUIPMENT CONTROL PACKAGE; FURNISHED INTEGRAL TO THE EQUIPMENT
MOTOR	MOTOR
FACP	FIRE ALARM CONTROL PANEL
ANN	FIRE ALARM ANNUNCIATOR PANEL
K	FIRE FIGHTERS KEYBOX
■	FIRE ALARM SYSTEM MANUAL PULLSTATION
ES	SPRINKLER SYSTEM FLOW SWITCH
TS	SPRINKLER SYSTEM TAMPER SWITCH
ES	SPRINKLER SYSTEM PRESSURE SWITCH
IM	FIRE ALARM SYSTEM INPUT MODULE
OM	FIRE ALARM SYSTEM OUTPUT MODULE
S	PHOTOELECTRIC SMOKE DETECTOR; SB = SOUNDER BASE, LF = LOW FREQUENCY, SS = SINGLE STATION (NON-SYSTEM)
SC	SMOKE/CARBON MONOXIDE COMBO DETECTOR; SB = SOUNDER BASE, LF = LOW FREQUENCY, SS = SINGLE STATION (NON-SYSTEM)
30	FIRE ALARM SYSTEM HORN/STROBE WITH CANDELA RATING INDICATED
30	FIRE ALARM SYSTEM STROBE VISUAL SIGNAL WITH CANDELA RATING INDICATED
SS	FIRE ALARM STROBE VISUAL SIGNAL, CEILING MOUNTED, SS = SINGLE STATION (NON-SYSTEM)
TV1D	DATA (LAN) DEVICE OUTLET, NUMBER INDICATES NUMBER OF CABLES; TV1D = ONE VOICE, ONE DATA JACK/CABLE
TV	CATV (CABLE TELEVISION) DEVICE OUTLET
WAP	CEILING MOUNTED DATA (LAN) WIRELESS ACCESS POINT, NUMBER INDICATES NUMBER OF CABLES
ECCP	ELEVATOR COMMUNICATIONS MASTER ANNUNCIATOR CONTROL PANEL
ES	ELEVATOR COMMUNICATIONS CALL STATION
■	SECURITY CAMERA LOCATION, CEILING MOUNTED, UON
ES	ACCESS CONTROL SYSTEM CARD READER
MPAP	MONITOR POINT ACCESS POINT

**ELECTRICAL ABBREVIATIONS:**

OHE	OVERHEAD ELECTRICAL LINES
AFF, AFG, AFR	ABOVE FINISH FLOOR, GRADE, ROOF
NL	NIGHT LIGHTING LUMINAIRE, CONNECTED TO UNSWITCHED PORTION OF LIGHTING CIRCUIT
WP	WEATHERPROOF WITH COVER "CLOSED" FOR RECEPTACLES; NEMA 3R FOR ENCLOSURES
WL	WET LOCATION WITH COVER "OPEN" FOR RECEPTACLES; NEMA 4 FOR ENCLOSURES
AC	ABOVE COUNTER
CM	CEILING MOUNTED
WM	WALL MOUNTED
TYP	TYPICAL
NTS	NOT TO SCALE
UON	UNLESS OTHERWISE NOTED
(X)	EXISTING, TO REMAIN
(RX)	REMOVE EXISTING
(RR)	REMOVE, RELOCATE
(R)	RELOCATED
(N)	NEW
(F)	FUTURE
MECH	MECHANICAL EQUIPMENT CONNECTION
BLDG	BUILDING EQUIPMENT CONNECTION

**GENERAL NOTES:**

THESE GENERAL NOTES APPLY TO ALL ELECTRICAL PLAN DRAWINGS.

- FOLLOW ALL APPLICABLE CODES AND USE GOOD ELECTRICAL CONSTRUCTION PRACTICES WHEN DETERMINING TYPES OF WIRING METHODS AND SIZING OF CONDUCTORS AND CONDUIT. INSTALL ALL POWER, CONTROL AND SIGNAL WIRING USING METHODS AS FOLLOWS:
  - UNDERGROUND ELECTRIC SERVICE WIRING: INDIVIDUAL CONDUCTORS IN GALVANIZED STEEL RIGID METALLIC CONDUIT (RMC) AS PER THE REQUIREMENTS OF LIBERTY UTILITIES.
  - UNDERGROUND WIRING OR BENEATH CONCRETE SLAB (NOT ELECTRICAL SERVICE WIRING): INDIVIDUAL CONDUCTORS IN SCHEDULE 40 PVC RIGID NON-METALLIC CONDUIT (RNC) FOR DIRECT BURIAL; TRANSITION TO GALVANIZED STEEL RIGID METALLIC CONDUIT (RMC) WHERE CONDUIT RISES TO BE EXPOSED ABOVE GRADE OR CONCRETE SLAB, FROM A MINIMUM OF 24" BELOW FINISHED GRADE.
  - UNDERGROUND WIRING OR BENEATH ROAD WAY OR PARKING AREA: INDIVIDUAL CONDUCTORS IN SCHEDULE 80 PVC RIGID NON-METALLIC CONDUIT (RNC) FOR DIRECT BURIAL; TRANSITION TO GALVANIZED STEEL RIGID METALLIC CONDUIT (RMC) WHERE CONDUIT RISES TO BE EXPOSED ABOVE GRADE OR CONCRETE SLAB, FROM A MINIMUM OF 24" BELOW FINISHED GRADE.
  - EXPOSED, EXTERIOR LOCATIONS: INDIVIDUAL CONDUCTORS IN GALVANIZED STEEL RIGID METALLIC CONDUIT (RMC) WITH CONNECTIONS TO MOTORIZED (VIBRATING) EQUIPMENT SHALL BE LIQUID TIGHT FLEXIBLE METALLIC CONDUIT (LFMC), MAXIMUM 6' LENGTH
  - WIRING CONCEALED IN INACCESSIBLE WALLS AND CEILINGS: MULTI-CONDUCTOR TYPE NM (NON-METALLIC SHEATHED) AND TYPE SE (SERVICE ENTRANCE) CABLE.
  - CONCEALED WIRING ABOVE ACCESSIBLE CEILINGS: MULTI-CONDUCTOR TYPE NM (NON-METALLIC SHEATHED) AND TYPE SE (SERVICE ENTRANCE) CABLE.
  - EXPOSED BRANCH CIRCUITS (MECHANICAL ROOM, UTILITY SPACES): INDIVIDUAL CONDUCTORS IN ELECTRICAL METALLIC TUBING (EMT) WITH SET SCREW FITTINGS; FINAL CONNECTIONS TO MOTORIZED (VIBRATING) EQUIPMENT SHALL BE FLEXIBLE METALLIC CONDUIT (FMC), MAXIMUM 6' LENGTH
  - CONTRACTOR SHALL CONSULT WITH ENGINEER REGARDING QUESTIONS REGARDING WIRING METHODS PRIOR TO ROUGH-IN OF WIRING
  - MINIMUM CONDUCTOR SIZE SHALL BE 12 AWG. PROVIDE AN INSULATED GROUND CONDUCTOR WITHIN ALL CABLES AND RACEWAYS. ALL CONDUCTORS SHALL BE COPPER, UNLESS OTHERWISE NOTED.
  - CIRCUITS SHALL BE 20A1P, (2)12, 1(12G) 1/2". OR CABLE, UNLESS INDICATED OTHERWISE.
  - ALL WIRING SHALL BE ROUTED CONCEALED AND DEVICES SHALL BE FLUSH/RECESSED MOUNTED TO THE GREATEST EXTENT POSSIBLE. WIRING IN THE UTILITY SPACES SHALL BE PERMITTED TO BE EXPOSED WHERE NO WALL FINISH EXISTS. WIRING ROUTED EXPOSED ON VERTICAL SURFACES SHALL BE ROUTED VERTICALLY; HORIZONTAL WIRING SHALL BE ROUTED AT THE CEILING LEVEL OF THESE SPACES, NOT ON THE WALLS.
  - MOUNT LIGHTING CONTROL SWITCHES 48" ABOVE FINISHED FLOOR, WITHIN 6" OF THE LATCH SIDE OF THE DOOR, UNLESS OTHERWISE INDICATED. "AC" INDICATES MOUNTING 8" ABOVE COUNTER BACK SPLASH, APPROXIMATELY 44" ABOVE FINISHED FLOOR.
  - EXIT SIGN LUMINAIRES SHALL BE CONNECTED TO THE LIFE SAFETY LIGHTING CIRCUIT SERVING THE AREA, AHEAD OF ANY SWITCHING OR AUTOMATIC CONTROLS.
  - ALL LIGHTING LAYOUTS SHALL BE COORDINATED WITH ARCHITECT'S REFLECTED CEILING PLANS AND EXACT LOCATION OF LUMINAIRES SHALL BE CHECKED AT CONSTRUCTION TIME AND PRIOR TO INSTALLATION WITH OTHER TRADES' LATEST DRAWINGS AND EQUIPMENT LAYOUTS. COORDINATE LUMINAIRE TRIMS AND MOUNTING WITH CEILING CONSTRUCTION. FINAL LOCATION OF LUMINAIRES SHALL BE REASONABLY CONDUIVE TO ACCESS BY THE OWNER FOR ROUTINE MAINTENANCE.
  - MOUNT RECEPTACLE DEVICES 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED. MOUNT RECEPTACLE DEVICES SUCH THAT THEY ARE ORIENTED SO THE GROUND IS IN THE "UP" POSITION. "AC" INDICATES MOUNTING 8" OVER COUNTER BACK SPLASH, APPROXIMATELY 44" ABOVE FINISHED FLOOR.
  - ALL RECEPTACLES SHALL BE TAMPER PROOF STYLE.
  - ENSURE RECEPTACLE PLACEMENT MEETS ALL DWELLING UNIT CODE REQUIREMENTS, INCLUDING MAXIMUM 12" ON CENTER SPACING.
  - RECEPTACLE (GENERALLY DEVICES) PLACEMENT ON WALLS COMMON BETWEEN DORM ROOMS SHALL BE LOCATED IN SEPARATE WALL CAVITY FROM THE NEIGHBORING ROOM.
  - DO NOT LOCATE ANY RECEPTACLES ABOVE ELECTRIC BASEBOARD HEAT.
  - PROVIDE MEMBRANE PROTECTION FOR ALL DEVICE BOXES PENETRATING FIRE RATED WALLS
  - BASIS OF DESIGN PRODUCT IS 3M FIRE BARRIER MOLDABLE PUTTY PADS MFP4. PROVIDE A SUBMITTAL PRODUCT INFORMATION FOR REVIEW AND APPROVAL.
  - AIR AND VAPOR TIGHT BOXES SHALL BE USED AT EXTERIOR WALLS AND CEILINGS, BELOW ATTIC SPACES, AND ADJACENT TO UNCONDITIONED SPACES. THIS INCLUDES ALL ELECTRICAL BOXES, CABLE BOXES, FIRE SAFETY SYSTEM BOXES, ETC.
  - SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS TO MAINTAIN A MINIMUM 3'-0" SEPARATION FROM ANY HVAC DIFFUSER OR PADDLE FAN.
  - WHERE MECHANICAL EQUIPMENT IS INDICATED ON PLAN WITHOUT LOCAL DISCONNECT, EITHER IT IS FURNISHED WITH THE EQUIPMENT OR IS INDICATED IN THE EQUIPMENT WIRING DIAGRAM, AND EQUIPMENT SCHEDULE. REFER TO MECHANICAL EQUIPMENT SCHEDULE AND WIRING DIAGRAMS FOR CONNECTIONS TO CONTROL DEVICES.

**ELECTRICAL ALTERNATES**

REFER TO SPECIFICATION SECTION 26 0010, ELECTRICAL GENERAL PROVISIONS, FOR ALTERNATES THAT AFFECT THE ELECTRICAL WORK INDICATED ON THESE DOCUMENTS.



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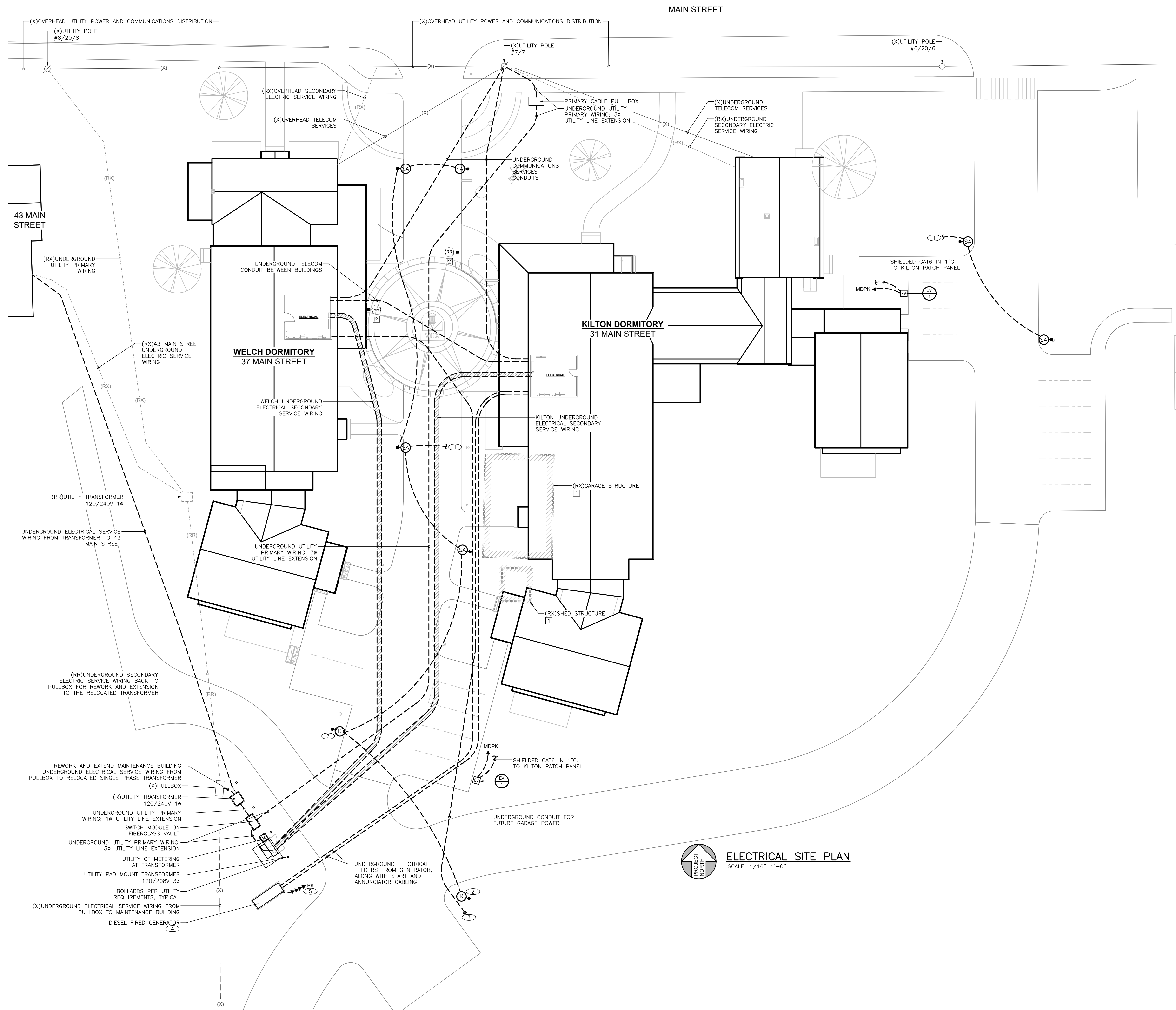
**KUA  
KILTON/WELCH  
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**ELECTRICAL  
NOTES, LEGEND,  
DETAILS**

**E1**





- (X)OVERHEAD UTILITY POWER AND COMMUNICATIONS DISTRIBUTION
- (X)UTILITY POLE #8/20/8
- (RX)OVERHEAD SECONDARY ELECTRIC SERVICE WIRING
- (RX)OVERHEAD TELECOM SERVICES
- (X)UTILITY POLE #7/7
- (X)UTILITY POLE #6/20/6
- (RX)UNDERGROUND TELECOM SERVICES
- (RX)UNDERGROUND SECONDARY ELECTRIC SERVICE WIRING
- PRIMARY CABLE PULL BOX
- UNDERGROUND UTILITY PRIMARY WIRING, 3ø
- UTILITY LINE EXTENSION
- UNDERGROUND COMMUNICATIONS SERVICES CONDUITS
- UNDERGROUND TELECOM CONDUIT BETWEEN BUILDINGS
- WELCH DORMITORY 37 MAIN STREET
- WELCH UNDERGROUND ELECTRICAL SECONDARY SERVICE WIRING
- (RX)43 MAIN STREET UNDERGROUND ELECTRIC SERVICE WIRING
- (RX)UNDERGROUND UTILITY PRIMARY WIRING
- (RR)UTILITY TRANSFORMER 120/240V 1ø
- UNDERGROUND ELECTRICAL SERVICE WIRING FROM TRANSFORMER TO 43 MAIN STREET
- (RR)UTILITY TRANSFORMER 120/240V 1ø
- UNDERGROUND UTILITY PRIMARY WIRING, 3ø
- UTILITY LINE EXTENSION
- (RX)SHED STRUCTURE
- (RX)GARAGE STRUCTURE
- KILTON DORMITORY 31 MAIN STREET
- KILTON UNDERGROUND ELECTRICAL SECONDARY SERVICE WIRING
- (RR)UTILITY TRANSFORMER 120/240V 1ø
- UNDERGROUND UTILITY PRIMARY WIRING, 1ø
- UTILITY LINE EXTENSION
- SWITCH MODULE ON FIBERGLASS VAULT
- UTILITY CT METERING AT TRANSFORMER
- UTILITY PAD MOUNT TRANSFORMER 120/208V 3ø
- BOLLARDS PER UTILITY REQUIREMENTS, TYPICAL
- (X)UNDERGROUND SECONDARY ELECTRIC SERVICE WIRING BACK TO PULLBOX FOR REWORK AND EXTENSION TO THE RELOCATED TRANSFORMER
- UNDERGROUND ELECTRICAL FEEDERS FROM GENERATOR, ALONG WITH START AND ANNUNCIATOR CABLING
- UNDERGROUND UTILITY PRIMARY WIRING, 1ø
- UTILITY LINE EXTENSION
- REWORK AND EXTEND MAINTENANCE BUILDING UNDERGROUND ELECTRICAL SERVICE WIRING FROM PULLBOX TO RELOCATED SINGLE PHASE TRANSFORMER
- (X)PULLBOX
- (R)UTILITY TRANSFORMER 120/240V 1ø
- UNDERGROUND UTILITY PRIMARY WIRING, 1ø
- UTILITY LINE EXTENSION
- UTILITY PAD MOUNT TRANSFORMER 120/208V 3ø
- BOLLARDS PER UTILITY REQUIREMENTS, TYPICAL
- (X)UNDERGROUND SECONDARY ELECTRIC SERVICE WIRING FROM PULLBOX TO MAINTENANCE BUILDING
- DIESEL FIRED GENERATOR

**ELECTRICAL SITE PLAN**  
SCALE: 1/16"=1'-0"

**GENERAL NOTES:**

- REFER TO GENERAL NOTES ON DRAWING E1 WHICH APPLY TO THIS DRAWING AS WELL AS ANY NOTES WHICH FOLLOW.
- REFER TO CIVIL DRAWINGS FOR LIGHT POLE BASE DETAIL.
  - ROUTING OF UNDERGROUND ELECTRICAL ON THIS PLAN IS TO SHOW GENERAL ROUTING. REFER TO CIVIL DRAWINGS FOR ACTUAL ROUTING THROUGH THE SITE COORDINATED WITH OTHER TRADES AND SITE FEATURES.
  - INSTALLATION OF RACEWAYS AND EQUIPMENT FOR LIBERTY UNDERGROUND PRIMARY LINE EXTENSIONS SHALL BE INSTALLED AS PER LIBERTY REQUIREMENTS, INCLUDING CONCRETE ENCASEMENT OF PRIMARY WIRING RACEWAYS.

**GENERAL DEMOLITION NOTES:**

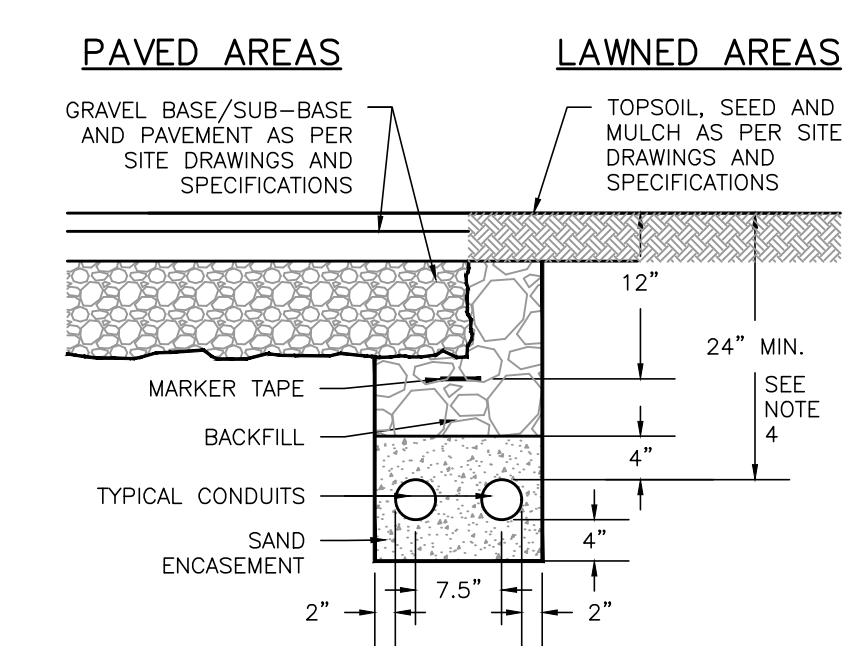
- THESE DEMOLITION NOTES APPLY TO ALL DEMOLITION REQUIRED OF THIS PROJECT AND AS GENERALLY INDICATED ON THE DEMOLITION AND CONSTRUCTION DRAWINGS.
- ITEMS INDICATED AS EXISTING TO REMAIN ARE SHOWN FOR INFORMATIONAL PURPOSES, ONLY.
- DEMOLITION AND RELOCATION WORK INDICATED ON THE DRAWINGS IS BASED UPON THE BEST AVAILABLE INFORMATION. THE ELECTRICAL CONTRACTOR SHALL WALK THROUGH THE DEMOLITION AREAS TO IDENTIFY THE EXACT LOCATION AND ELECTRICAL WORK INVOLVED PRIOR TO BIDDING. MAJOR DEVIATIONS FOUND SHALL BE REPORTED TO THE ENGINEER.
- REMOVE ALL LUMINAIRES, DEVICES, WIRING AND CONDUIT ON THE WALLS AND CEILING TO BE DEMOLISHED. WIRING AND CONDUIT SHALL BE REMOVED TO THE LAST LIVE OUTLET TO REMAIN OR ALL THE WAY TO THE SOURCE, AS NOTED. REWORK AND EXTEND EXISTING CIRCUIT WIRING AND CONDUITS AS NECESSARY TO MAINTAIN POWER TO EXISTING DEVICES AND EQUIPMENT TO REMAIN.
- THE ELECTRICAL CONTRACTOR SHALL REVIEW MATERIAL AND EQUIPMENT TO BE SALVAGED AT THE BEGINNING OF THE PROJECT WITH THE OWNER AND GENERAL CONTRACTOR. THE MATERIAL AND EQUIPMENT MAY INCLUDE FIRE ALARM DEVICES, SECURITY SYSTEM DEVICES, ETC. IN GENERAL, ALL MATERIAL NOT REQUESTED TO BE SALVAGED BY THE OWNER SHALL BECOME THE PROPERTY OF THE ELECTRICAL CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR THE PROPER ENVIRONMENTAL DISPOSAL OF THESE MATERIALS.
- REWORKING EXISTING CIRCUITS, CONNECTING TO EXISTING CIRCUITS OR EXTENDING EXISTING CIRCUITS SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY. ALL PANELBOARDS, SWITCHES, RECEPTACLES, DEVICES, ETC., TO BE USED, WHETHER SHOWN OR NOT SHOWN, SHALL BE TO THE DISCRETION OF THE ELECTRICAL CONTRACTOR AND HIS RESPONSIBILITY TO FIELD VERIFY. MAJOR DEVIATIONS SHALL BE REPORTED TO THE ENGINEER.

**DEMOLITION DRAWING NOTES:**

- [1] DISCONNECT AND REMOVE ANY FEEDER WIRING TO THIS STRUCTURE BACK TO SOURCE TO ALLOW FOR STRUCTURE DEMOLITION.
- [2] DISCONNECT AND REMOVE POLE LUMINAIRE AND RETAIN FOR REUSE. REMOVE WIRING BACK TO SOURCE.

**DRAWING NOTES:**

- THESE DRAWING NOTES APPLY TO THIS DRAWING, ONLY.
- TO EXTERIOR LIGHTING CONTROLS IN KILTON.
  - RELOCATED POLE LUMINAIRE.
  - PROVIDE NEW FEEDER TO EXISTING PANELBOARD IN RELOCATED GARAGE. PROVIDE GROUND ROD ELECTRODE WITH #4CU GROUNDING ELECTRODE CONDUCTOR FROM EXISTING PANEL TO ROD.
  - LOCATE GENERATOR ON A 6" THICK CONCRETE PAD, 4" LARGER THAN GENERATOR FOOT PRINT, IN ALL DIRECTIONS.
  - PROVIDE CIRCUITS FROM PANEL PK IN KILTON DORM FOR GENERATOR BLOCK/ON, HEATER, ALTERNATOR HEATER, BATTERY CHARGER AND RECEPTACLE. ALL CIRCUIT WIRING TO BE (2#8, 1#10G) 1" C.



- NOTES:**
- DETAIL IS TYPICAL FOR ALL WIRING THAT IS NOT ELECTRICAL SERVICE POWER WIRING.
  - COMPLY WITH OSHA TRENCH PROTECTION REQUIREMENTS.
  - PROVIDE CONDUIT SPACERS/SADDLES EVERY 6 FEET.
  - BURIAL DEPTH IS SHOWN FOR DIRECT BURIAL. PVC RIGID NON-METALLIC CONDUIT, WHERE SPECIFIED BURIAL DEPTH IS NOT POSSIBLE, UTILIZE GALVANIZED STEEL RIGID METALLIC CONDUIT. NOTIFY ENGINEER PRIOR TO ANY CHANGE OF WIRING METHODS.
  - DETAIL IS TYPICAL INSTALLATION; PROVIDE QUANTITY OF CONDUITS AS REQUIRED FOR THE INSTALLATION AND AS DIRECTED IN THE PLANS AND DETAILS.

**TYPICAL ELECTRICAL DUCTBANK DETAIL**  
NO SCALE



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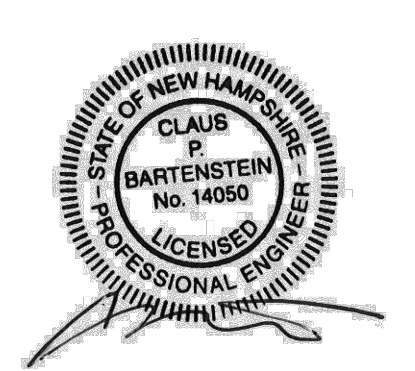
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**ELECTRICAL  
SITE PLAN**

**E2**