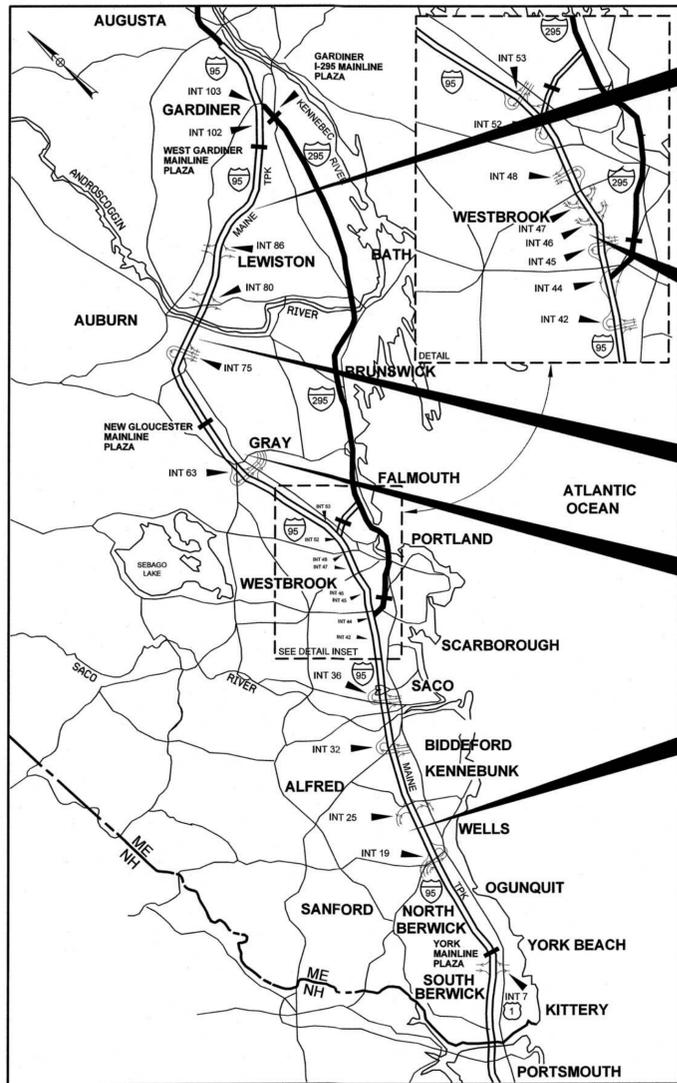


Date: 11/12/2018



LOCATION MAP



THE GOLD STAR MEMORIAL HIGHWAY

# MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR  
 ROBERT D. STONE, VICE CHAIR  
 MICHAEL J. CIANCHETTE, MEMBER  
 JOHN E. DORITY, MEMBER  
 ANN R. ROBINSON, MEMBER  
 THOMAS J. ZUKE, MEMBER  
 KAREN S. DOYLE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

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CONTRACT 2018.23

## CONTRACT 2018.23

# MAINTENANCE GARAGE EXTENSIONS AND HVAC SYSTEM IMPROVEMENTS IN AUBURN, CROSBY, GRAY, KENNEBUNK, AND LITCHFIELD



APPROVED: MAINE TURNPIKE AUTHORITY

*Peter S. Merfeld* 11/13/18  
 PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER DATE

*Stephen R. Hartre* 11/13/18  
 STEPHEN R. HARTRE, P.E. - DIRECTOR OF ENGINEERING & BUILDING MAINTENANCE DATE

*John W. Cannell* 11/13/18  
 JOHN W. CANNELL - DIRECTOR OF HIGHWAY & EQUIPMENT AND MAINTENANCE DATE



MECHANICAL DESIGN  
MECHANICAL SYSTEMS ENGINEERS  
SHEETS EM-01 TO EM-12

KURT MAGNUSSON, P.E.

MECHANICAL SYSTEMS ENGINEERS

11/13/18  
DATE



*Roland A. Lavallee*  
 ROLAND A. LAVALLEE P.E., PLS  
 VICE PRESIDENT  
 DIRECTOR OF OPERATIONS

11/14/18  
DATE

Filename: 001\_Title.dgn

**GENERAL NOTES**

1. THE FOLLOWING BUILDING CODES AND STANDARDS SHALL BE REFERENCED DURING CONSTRUCTION:  
IBC INTERNATIONAL BUILDING CODE, 2015

ASCE 7 AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 2016

ACI 301 AMERICAN CONCRETE INSTITUTE, SPECIFICATION FOR STRUCTURAL CONCRETE, 2016

AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION, STEEL CONSTRUCTION MANUAL, 2017

ACI 318 AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, 2014

ASTM AMERICAN SOCIETY OF TESTING AND MATERIALS

NATIONAL FOREST PRODUCTS ASSOCIATION, NDS NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION, 2015

2. COPIES OF THE AS-BUILT PLANS ARE NOT AVAILABLE. EXISTING DIMENSIONS AND CONDITIONS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING CONSTRUCTION AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION OR FABRICATION. ALL DISCREPANCIES SHALL BE REPORTED TO THE MAINE TURNPIKE AUTHORITY PRIOR TO COMMENCING WORK.

3. ALL MATERIALS STORED ON THE PROJECT SHALL BE PROTECTED FROM THE ELEMENTS BY BEING STORED INDOORS ABOVE GROUND LEVEL ON SUITABLE DUNNAGE.

4. ALL MATERIALS REQUIRED TO BE REMOVED AND REUSED SHALL BE MAINTAINED IN SERVICEABLE CONDITION, STORED IN A MOISTURE FREE ENVIRONMENT INDOORS ABOVE THE GROUND LEVEL ON SUITABLE DUNNAGE.

5. THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 AND DIG SMART AT 207-749-7231 AT LEAST 72 HOURS PRIOR TO START OF WORK. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT CAN ARRANGE FOR MAINE TURNPIKE UNDERGROUND UTILITY LOCATION. EXCAVATION LOCATIONS SHALL BE MARKED AT THE NOTIFICATION TIME. EXCAVATION WILL NOT BE PERMITTED UNTIL THE AUTHORITY HAS LOCATED AND MARKED ITS UNDERGROUND UTILITIES, OR NOTIFIED THE RESIDENT THERE ARE NO UNDERGROUND UTILITIES IN THE MARKED AREAS.

6. THE AUTHORITY HAS PROGRAMMED TWO FIELD VISITS FOR MAINE TURNPIKE UTILITY COORDINATION ON THIS PROJECT. SHOULD THE CONTRACTOR NEED ADDITIONAL EXCAVATION LOCATIONS MARKED, OR SHOULD THE CONTRACTOR FAIL TO MAINTAIN THE AUTHORITY'S PREVIOUSLY ESTABLISHED DIG SAFE MARKS, THE AUTHORITY SHALL DEDUCT THE ADDED MARKING COSTS FROM THE CONTRACTOR'S PAYMENTS.

7. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH OSHA SUBPART P OF 29 CFR PART 1926.650-62 (CONSTRUCTION STANDARDS FOR EXCAVATIONS).

8. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD DETAILS NOVEMBER 2014 WITH LATEST REVISIONS AND MAINEDOT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL LATEST REVISION UNLESS OTHERWISE INDICATED IN THESE PLANS.

9. THERE ARE NO PERMANENT OR TEMPORARY EASEMENTS ASSOCIATED WITH THIS PROJECT. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING RIGHT OF WAY.

10. THE CONTRACTOR SHALL SUBMIT THE PROPOSED STAGING AREA(S) TO THE RESIDENT PRIOR TO STARTING WORK.

II. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS AFTER CONSTRUCTION IS COMPLETED.

**GENERAL SCOPE OF WORK:**

1. CONSTRUCT A BUILDING EXTENSION OFF THE BACK OF THE FOLLOWING MAINTENANCE GARAGES:  
AUBURN, ONE (1) BUILDING  
CROSBY, THREE (3) BUILDINGS  
GRAY, ONE (1) BUILDING  
KENNEBUNK, TWO (2) BUILDINGS  
LITCHFIELD, ONE (1) BUILDING.

2. THE NEW BUILDING CONSTRUCTION SHALL INCLUDE: TEMPORARY SUPPORT, SLAB-ON-GRADE, STUD WALL, ROOF RAFTERS, SHEATHING, COLUMNS AND LVL HEADER.

3. REMOVE ALL EXISTING SIDING AND REPLACE WITH NEW PREFORMED METAL SIDING.

4. REMOVE ALL EXISTING ROOF SHINGLES AND REPLACE WITH NEW PREFORMED METAL ROOFING.

5. ADD LED LIGHTS IN EACH BAY OF GARAGE.

6. REINSTALL ELECTRICAL CONDUITS AND ADD OUTLETS AS SHOWN ON THE PLANS.

7. ADD HVAC AT (1) AUBURN GARAGE, (3) CROSBY GARAGES, (1) GRAY GARAGE, (2) KENNEBUNK GARAGES, AND (1) LITCHFIELD GARAGE AS SHOWN IN THE PLANS.

**FOUNDATION NOTES:**

1. ALL FILL USED TO SUPPORT SLABS-ON-GRADE SHALL BE WELL-GRADED 12" CRUSHED GRAVEL MEETING THE REQUIREMENTS IN THE CONTRACT SPECIFICATIONS.

2. PRESUMED ALLOWABLE SOIL BEARING PRESSURE USED IN DESIGN = 2,000 PSF. THE CONTRACTOR SHALL NOTIFY THE AUTHORITY IF ANY UNSUITABLE SOILS ARE ENCOUNTERED PRIOR TO PLACING FOUNDATIONS. 2 FT OF UNSUITABLE SOIL ASSUMED AT GRAY WILL NEED TO BE EXCAVATED AND REPLACED.

3. SLABS-ON-GRADE SHALL REACH THEIR FULL DESIGN STRENGTH PRIOR TO LOADING. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING/BRACING AS NECESSARY TO PLACE STRUCTURAL FILL AND CONSTRUCT SLAB-ON-GRADE.

4. CARE SHALL BE TAKEN DURING EXCAVATION NOT TO DISRUPT EXISTING UTILITIES AND DRAINAGE. IF EXISTING UTILITIES ARE DAMAGED DURING EXCAVATION OR SLAB CONSTRUCTION, THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGED UTILITIES AT NO ADDITIONAL COST TO THE AUTHORITY.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHORING AND BRACING OF EXISTING STRUCTURES DURING EXCAVATION, BACKFILLING AND CONSTRUCTION. CONTRACTOR SHALL SLOPE EXCAVATIONS TO ACHIEVE SOIL STABILITY.

**CONCRETE REINFORCING NOTES:**

1. USE DEFORMED EPOXY COATED STEEL REINFORCING BARS, GRADE 60 IN CONFORMANCE WITH ASTM A775/ A 775M. REINFORCEMENT SHALL BE PLACED AND SUPPORTED PRIOR TO CONCRETE PLACEMENT, AND SHALL BE SECURED AGAINST DISPLACEMENT.

2. THE CONTRACTOR SHALL SUBMIT REINFORCING SHOP DRAWINGS TO THE MAINE TURNPIKE AUTHORITY FOR REVIEW AND ACCEPTANCE PRIOR TO COMMENCING FABRICATION. SHOP DRAWINGS SHALL SHOW REINFORCING STEEL PLACEMENT DETAILS AND SECTIONS.

3. MINIMUM CONCRETE COVER FOR REINFORCEMENT:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER	2 INCHES
CONCRETE NOT EXPOSED TO EARTH OR WEATHER IN SLABS AND WALLS	1 1/2 INCHES
CONCRETE NOT EXPOSED TO EARTH OR WEATHER IN CURBS	1 1/2 INCHES

4. CONTINUOUS REINFORCEMENT SHALL BE TENSION LAP SPLICED PER LAP SLICE LENGTH TABLE, U.N.O.

LAP SPLICE LENGTH TABLE	
BAR SIZE	#3 #4 #5 #6 #7 #8 #9
MIN LAP SPLICE (INCHES)	17 23 28 42 49 58 74

5. REINFORCEMENT HOOKS SHALL CONFORM TO STANDARD HOOKS ACCORDING TO ACI 318.

6. WELDING OF REINFORCING IS NOT PERMITTED, U.N.O.

**CONCRETE NOTES:**

1. ALL CONCRETE WORK, INCLUDING MATERIAL SELECTION, ADMIXTURES, MIXING, AND PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH APPLICABLE BUILDING CODES IN ADDITION, REFERENCE THE CAST-IN-PLACE CONCRETE SPECIFICATIONS.

2. CONTRACTOR SHALL NOT PLACE CONCRETE ON FROZEN GROUND OR IN WATER. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING NEAR-FREEZING, OR FREEZING WEATHER. REFERENCE SECTION 502.08 COLD WEATHER CONCRETE OF "STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, REVISION OF NOVEMBER 2014" FOR REQUIREMENTS FOR COLD WEATHER CURING.

3. CONTRACTOR SHALL SUBMIT PROPOSED CONCRETE MIX DESIGN AND LABORATORY TESTS OF FABRICATED CYLINDERS VERIFYING CONCRETE STRENGTH OR PERFORMANCE HISTORY OF MIX TO THE MAINE TURNPIKE AUTHORITY FOR ACCEPTANCE PRIOR TO PLACEMENT OF CONCRETE. CONCRETE USED ON SITE SHALL BE FIELD TESTED BY THE MAINE TURNPIKE AUTHORITY. FIELD TESTING INFORMATION SHALL INDICATE SLUMP, AIR CONTENT, AND TEMPERATURE. PROVIDE A SET OF FIVE CYLINDERS FOR EACH PLACEMENT AND PER 50 CUBIC YARDS OF CONCRETE PLACED. COMPRESSION TEST TWO CYLINDERS AT 7 DAYS AND TWO AT 28 DAYS. HOLD AN ADDITIONAL CYLINDER FOR A 56 DAY BREAK IF NECESSARY. THE MAINE TURNPIKE AUTHORITY SHALL PROVIDE ALL CONCRETE TESTING.

4. CONCRETE DESIGN STRENGTH SHALL BE A MINIMUM OF 4,000 PSI.

5. THREADED RODS SHALL CONFORM TO ASTM F1554, GRADE 55. THREADED RODS SHALL HAVE HEAVY HEX NUTS AND LOCK WASHERS. WET STICKING THREADED ROD SHALL NOT BE ACCEPTABLE.

6. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.

**WOOD NOTES:**

1. ALL LUMBER SHALL BE VISUALLY GRADED AND STAMPED WITH GRADE DESIGNATION, SPECS AND ADDITIONAL INSPECTION INFORMATION, U.N.O.

2. CARE SHALL BE TAKEN TO PROTECT TIMBER FROM WEATHER AND DAMPNESS. DO NOT STACK IN SUCH A WAY AS TO CAUSE WARPING OR PREVENT ADEQUATE AIR CIRCULATION. WARPED TIMBER MAY BE REJECTED.

3. WOOD GRADES AND SPECIES:  
A. SPRUCE-PINE-FIR NO.2 OR BETTER FOR TYPICAL LUMBER (STUDS, RAFTERS, ETC.) U.N.O.  
B. SOUTHERN YELLOW PINE FOR EXTERIOR EXPOSURE APPLICATIONS AND WHERE SHOWN ON DRAWINGS AS PRESERVATIVE PRESSURE TREATED LUMBER (PT OR PPT).  
C. WHERE NOTED LVL ON DRAWINGS PROVIDE VERSA LAM 3100 BY BOISE CASCADE OR EQUIVALENT, WHICH HAS THE FOLLOWING MINIMUM ALLOWABLE STRESSES:  
Fb = 3,100 PSI Fc = 2,510 PSI (PARALLEL TO GRAIN)  
Fv = 285 PSI Fc = 750 PSI (PERPENDICULAR TO GRAIN)  
Ft = 1,555 PPSI E = 2,000,000 PSI

4. STRUCTURAL LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19%

5. PROVIDE PRESSURE TREATED LUMBER FOR ALL LUMBER IN CONTACT WITH CONCRETE. ALL CONNECTORS THAT ARE IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIP GALVANIZED, U.N.O.

6. NOMINAL SIZES ARE TYPICALLY REFERENCED ON THE DRAWINGS. PROVIDE ACTUAL SIZES AS SET FORTH BY U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD PS20-99.

7. ALL PLYWOOD SHALL BE APA RATED SHEATHING.

8. PROVIDE FULL DEPTH BLOCKING AT ENDS AND INTERIOR SUPPORTS OF ALL RAFTERS WHERE RAFTERS FRAME OVER SUPPORTS. PROVIDE FULL DEPTH SOLID BLOCKING FOR EACH 8'-0" SPAN FOR ALL RAFTERS.

9. ALL FASTENERS AND WASHERS SHALL BE HOT-DIPED GALVANIZED, U.N.O.

10. ALIGN COLUMNS SUCH THAT COLUMNS BEAR CONTINUOUSLY TO FOUNDATION SUPPORT.

II. PROVIDE HORIZONTAL BLOCKING FOR ALL LOAD BEARING WALLS AT 4'-0" O.C. VERTICAL, MAXIMUM.

**LIST OF ABBREVIATIONS**

ABUT. - ABUTMENT	MTA - MAINE TURNPIKE AUTHORITY
ADDL. - ADDITIONAL	NB - NORTHBOUND
ALT. - ALTERNATE	N.F. - NEAR FACE
APPROX. - APPROXIMATELY	N.T.S. - NOT TO SCALE
BOT. - BOTTOM	PED. - PEDESTAL
BRG. - BEARING	PGL - PROFILE GRADE LINE
CL. - CLEAR	PL - PLATE
CL. - CENTERLINE	PROP. - PROPOSED
CONC. - CONCRETE	P.S.I. - POUNDS per SQUARE INCH
CONSTR. - CONSTRUCTION	RDWY. - ROADWAY
DEMO. - DEMOLITION	REQ'D - REQUIRED
DIA. - DIAMETER	SHLDR. - SHOULDER
EA. - EACH	SB - SOUTHBOUND
EB - EASTBOUND	SP. - SPACES
E.F. - EACH FACE	STA. - STATION
EL. - ELEVATION	T.&B. - TOP & BOTTOM
EQ. - EQUAL	TPKE. - TURNPIKE
EXIST. - EXISTING	TYP. - TYPICAL
EXP. - EXPANSION	U.N.O. - UNLESS NOTED OTHERWISE
F.F. - FAR FACE	V.I.F. - VERIFY IN FIELD
JT. - JOINT	VERT. - VERTICAL
MAX. - MAXIMUM	WB - WESTBOUND
MAINEDOT - MAINE DEPARTMENT OF TRANSPORTATION	W.P. - WORKING POINT
MIN. - MINIMUM	

Date: 11/12/2018

Filename: 002\_GeneralNotes.dgn

Scale:	Designed by:		<p style="text-align: center;">HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909</p>	<p style="font-size: 1.2em; font-weight: bold; margin-top: 5px;">THE GOLD STAR MEMORIAL HIGHWAY</p>	<p style="font-size: 1.2em; font-weight: bold;">MAINTENANCE GARAGE EXTENSIONS</p> <p style="font-size: 1.2em; font-weight: bold; margin-top: 20px;">GENERAL NOTES</p>																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">No.</th> <th style="width: 75%;">Revision</th> <th style="width: 10%;">By</th> <th style="width: 10%;">Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	Revision	By	Date																	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left;">CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE</th> </tr> <tr> <th> </th> <th>By</th> <th>Date</th> <th> </th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>BRG</td> <td>11\17</td> <td>Checked RBM 11\17</td> </tr> <tr> <td>Drawn</td> <td>ERB</td> <td>11\17</td> <td>In Charge of RAL 11\17</td> </tr> </tbody> </table>	CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					By	Date		Designed	BRG	11\17	Checked RBM 11\17	Drawn	ERB	11\17	In Charge of RAL 11\17	<p style="text-align: center;">MTA PROJECT MANAGER: BRIAN TADDEO, PE</p>	<p style="text-align: center;">CONTRACT: 2018.23</p>	<p style="text-align: center;">SHEET NUMBER: S1</p> <p style="text-align: right;">2 OF 58</p>
No.	Revision	By	Date																																					
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ITEM NO.	DESCRIPTION	UNIT	AUBURN QUANTITY	CROSBY #1 QUANTITY	CROSBY #2 QUANTITY	CROSBY #3 QUANTITY	GRAY QUANTITY	KENNEBUNK #1 QUANTITY	KENNEBUNK #2 QUANTITY	LITCHFIELD QUANTITY	TOTAL QUANTITY
815.01	Buildings - Auburn	LS	1								1
815.02	Buildings - Crosby #1	LS		1							1
815.03	Buildings - Crosby #2	LS			1						1
815.04	Buildings - Crosby #3	LS				1					1
815.05	Buildings - Gray	LS					1				1
815.06	Buildings - Kennebunk #1	LS						1			1
815.07	Buildings - Kennebunk #2	LS							1		1
815.08	Buildings - Litchfield	LS								1	1
815.09	Oil/Water Seperator Tank Relocation - Auburn	LS	1								1
815.1	Oil/Water Seperator Tank Relocation - Crosby #2	LS			1						1
815.11	Oil/Water Seperator Tank Relocation - Gray	LS					1				1
815.12	Waterline Relocation - Litchfield	LS								1	1
815.13	Wall Sheathing	SF	280	280	280	280	280	280	280	280	2240
815.14	Roof Sheeting	SF	700	700	500	750	750	750	750	750	5700
815.15	Windows	EA	3	3	3	3	4	4	4	3	28
815.16	Electrical Conduit	LF	180	180	180	230	300	300	300	230	2070
815.17	2" Diameter Copper Waterline	LF	100	100	100	130	160	160	160	120	1150
815.171	3/4" Diameter Copper Waterline	LF	15	15	15	15	15	15	15	15	120
815.18	Electrical Receptacle - Inside	EA	4	4	4	5	7	7	7	5	46
815.19	Electrical Receptacle - Outside	EA	4	4	3	4	14	4	4	4	31
815.2	Air Compressor	EA					1	1			3

Scale:			
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<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
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	ERB	11\17	In Charge of	RAL	11\17

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

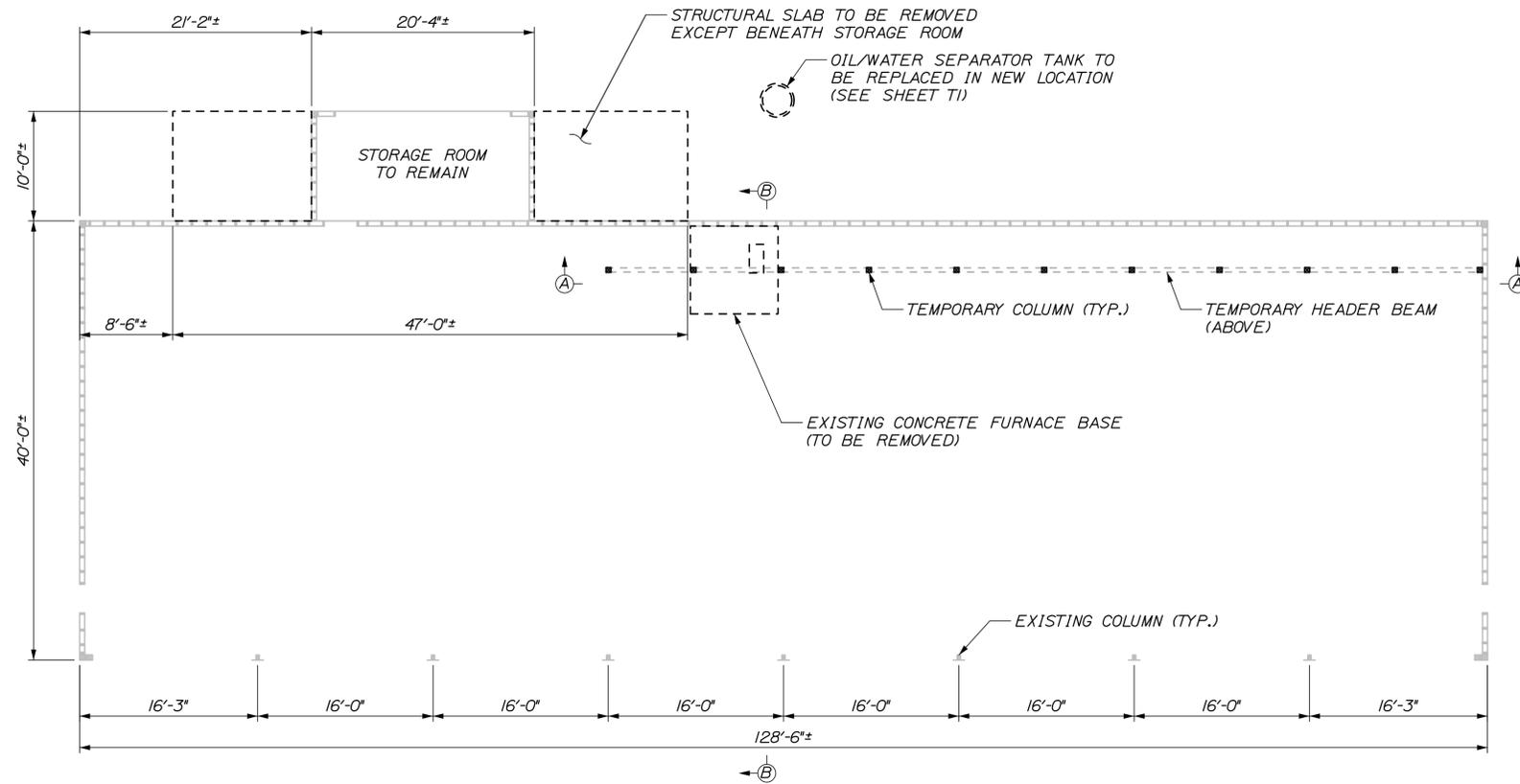
MAINTENANCE GARAGE EXTENSIONS

ESTIMATED QUANTITIES

SHEET NUMBER: S2

CONTRACT: 2018.23 3 OF 58

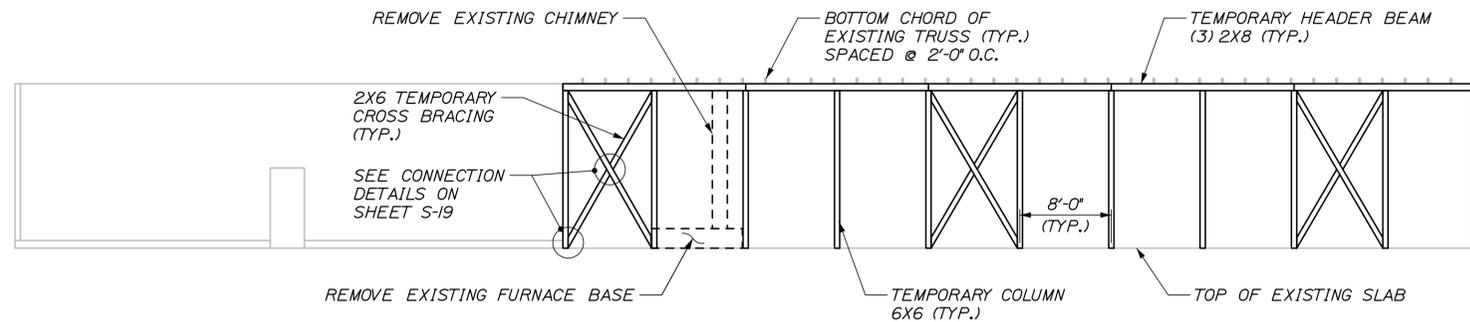
Date: 11/12/2018



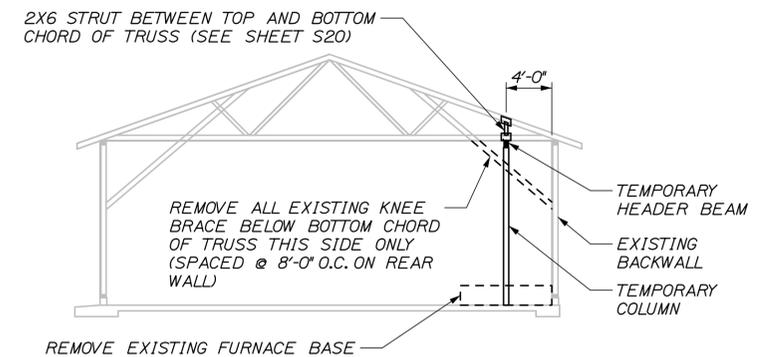
EXISTING FRAMING PLAN AND TEMPORARY SUPPORT PLAN VIEW  
SCALE: 1/8" = 1'-0"

**GENERAL PROCEDURE**

1. EXCAVATE AND REMOVE EXISTING OIL WATER SEPARATOR TANK. REPLACE WITH NEW TANK IN NEW LOCATION. SEE OIL WATER SEPARATOR TANK DETAILS ON SHEET T1 FOR MORE INFORMATION.
2. REMOVE SHEATHING ON WALLS AND BELOW TRUSS TO ALLOW ACCESS TO STRUCTURAL COMPONENTS.
3. REMOVE EXISTING CHIMNEY, CONCRETE FURNACE BASE, FURNACE, AND DUCT WORK.
4. LOCATE EXISTING STUDS IN BACK WALL AND INSTALL TEMPORARY COLUMNS OFFSET TO STUDS ACCORDING TO THE DETAILS ON THE STRUCTURAL PLANS. REMOVE EXISTING KNEE BRACE TO THE BOTTOM OF THE TRUSS AT LOCATIONS SHOWN ON THE STRUCTURAL PLANS. CEILING SHEATHING SHALL BE PATCHED AT REMOVED KNEE BRACE LOCATIONS.
5. INSTALL TEMPORARY HEADER BEAM TIGHTLY BENEATH EXISTING TRUSSES. INSTALL TEMPORARY STRUTS BETWEEN BOTTOM AND TOP CHORDS OF THE EXISTING TRUSS AS SHOWN ON THE STRUCTURAL PLANS. ALL MODIFICATION WORK COMPLETED WHILE THE TEMPORARY SUPPORT IS IN PLACE SHALL BE COMPLETED WITH ONLY STRUCTURAL DEAD LOAD ON THE ROOF. DO NOT PERFORM THIS WORK WHEN THE ROOF IS SUBJECT TO SNOW OR LIVE LOAD CONDITIONS.
6. REMOVE EXISTING BACKWALL, CURB AND PORTION OF THE ROOF AS SHOWN IN THE STRUCTURAL PLANS TO CONSTRUCT PROPOSED EXTENSION. PORTIONS OF THE BACK WALL, CURB, AND ROOF THAT ARE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
7. LAYOUT AND PLACE NEW CONCRETE SLAB-ON-GRADE AND CURB TO MATCH EXISTING FLOOR. SLOPE NEW FLOOR TO MATCH EXISTING DRAINAGE.
8. INSTALL NEW COLUMNS AND HEADER BEAMS ACCORDING TO THE DETAILS IN THE STRUCTURAL PLANS. PAINT NEW COLUMNS SAFETY ORANGE TO A HEIGHT OF 8' TO ENHANCE VISIBILITY.
9. CONSTRUCT NEW BACKWALL AND ROOF. TIE INTO AND MATCH EXISTING WALL CONSTRUCTION AND ROOF PITCH.
10. REMOVE TEMPORARY SUPPORT.
11. REMOVE ALL EXISTING SHINGLES, INSPECT ROOF SHEATHING, REPLACE ANY ROTTED SHEATHING OR DAMAGED WATERPROOFING. INSTALL NEW PREFORMED METAL ROOFING ON EXISTING AND NEW ROOF. NEW UNDERLAYMENT SHALL BE INSTALLED AT ALL LOCATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
12. REMOVE ALL EXISTING SIDING, INSPECT WALL SHEATHING, REPLACE ANY ROTTED SHEATHING. REPLACEMENT OF ROTTED SHEATHING SHALL BE PAID PER SHEATHING PAY ITEM. INSTALL NEW PREFORMED METAL SIDING ON EXISTING AND NEW WALLS.
13. INSTALL ELECTRICAL CONDUITS AND LED LIGHTS AT LOCATIONS AS DESCRIBED IN THE ELECTRICAL SPECIFICATIONS.
14. INSTALL NEW FURNACE UNITS AND DUCT WORK AS SHOWN ON THE MECHANICAL PLANS AND INSTALL DIRECT VENT OUT THE PROPOSED BACKWALL.



SECTION A-A  
SCALE: 1/8" = 1'-0"



SECTION B-B  
SCALE: 1/8" = 1'-0"  
EXISTING CHIMNEY NOT SHOWN FOR CLARITY

**NOTES:**

1. SEE SHEET S19 AND S20 FOR TEMPORARY COLUMN AND HEADER DETAILS.

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Scale:				Designed by:			
No.	Revision	By	Date	<div style="text-align: center;"> <p><b>THE GOLD STAR MEMORIAL HIGHWAY</b></p> </div>			
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE							
By	Date	By	Date				
Designed	BRG 11\17	Checked	RBM 11\17				
Drawn	ERB 11\17	In Charge of	RAL 11\17	<div style="text-align: center;"> <p><b>MTA PROJECT MANAGER: BRIAN TADDEO, PE</b></p> </div>			

Scale:				Designed by:			
No.	Revision	By	Date	<div style="text-align: center;"> <p><b>THE GOLD STAR MEMORIAL HIGHWAY</b></p> </div>			
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE							
By	Date	By	Date				
Designed	BRG 11\17	Checked	RBM 11\17				
Drawn	ERB 11\17	In Charge of	RAL 11\17	<div style="text-align: center;"> <p><b>MTA PROJECT MANAGER: BRIAN TADDEO, PE</b></p> </div>			

Scale:				Designed by:			
No.	Revision	By	Date	<div style="text-align: center;"> <p><b>THE GOLD STAR MEMORIAL HIGHWAY</b></p> </div>			
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE							
By	Date	By	Date				
Designed	BRG 11\17	Checked	RBM 11\17				
Drawn	ERB 11\17	In Charge of	RAL 11\17	<div style="text-align: center;"> <p><b>MTA PROJECT MANAGER: BRIAN TADDEO, PE</b></p> </div>			

Scale:				Designed by:			
No.	Revision	By	Date	<div style="text-align: center;"> <p><b>THE GOLD STAR MEMORIAL HIGHWAY</b></p> </div>			
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE							
By	Date	By	Date				
Designed	BRG 11\17	Checked	RBM 11\17				
Drawn	ERB 11\17	In Charge of	RAL 11\17	<div style="text-align: center;"> <p><b>MTA PROJECT MANAGER: BRIAN TADDEO, PE</b></p> </div>			

MAINTENANCE GARAGE EXTENSIONS  
TEMPORARY SUPPORT DETAILS  
(AUBURN)

SHEET NUMBER: S3

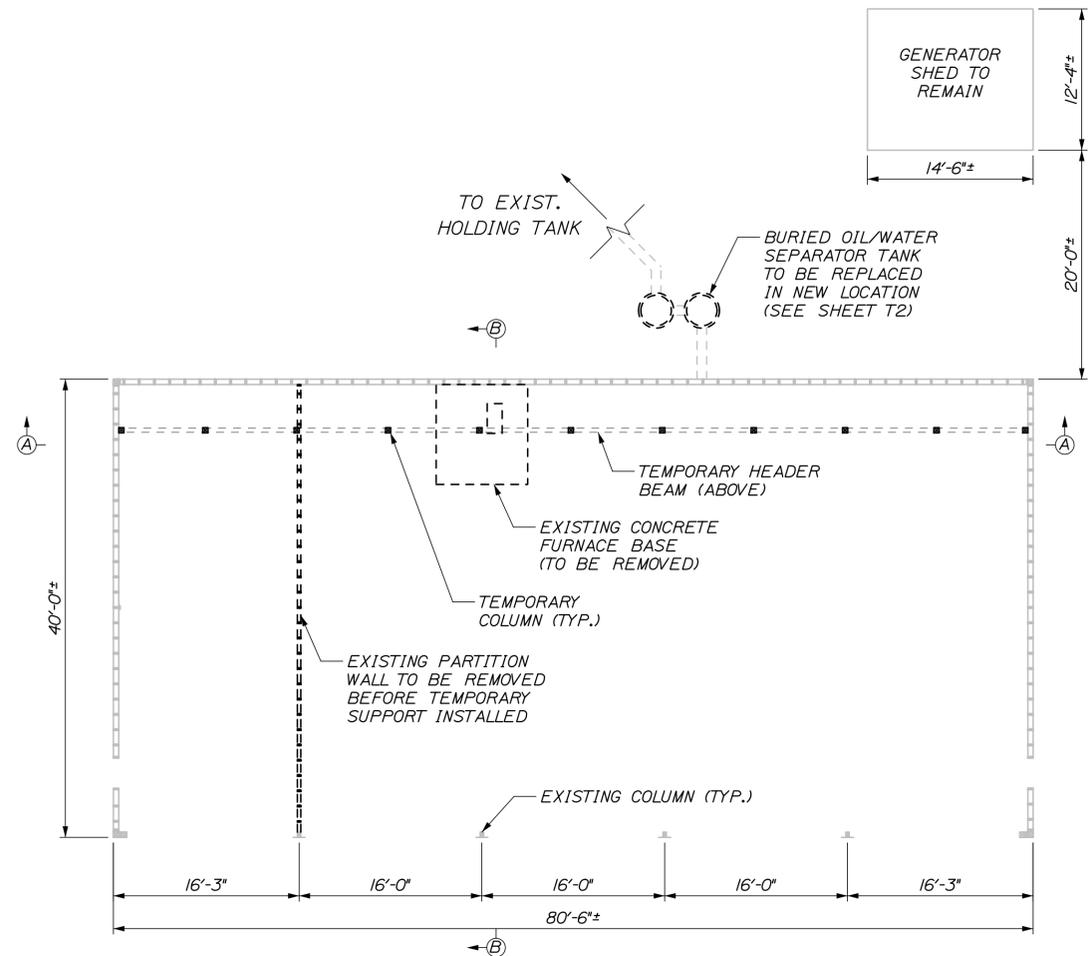
CONTRACT: 2018.23

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Filename: 004\_Temp\_Support\_Details\_Auburn.dgn



Date: 11/12/2018



**EXISTING FRAMING PLAN AND TEMPORARY SUPPORT PLAN VIEW**  
SCALE: 1/8" = 1'-0"



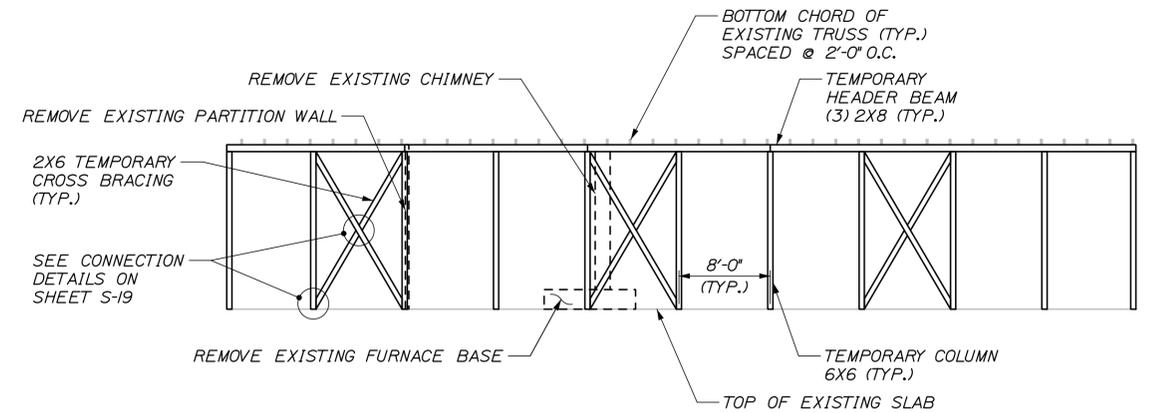
**KEY PLAN**

**GENERAL PROCEDURE**

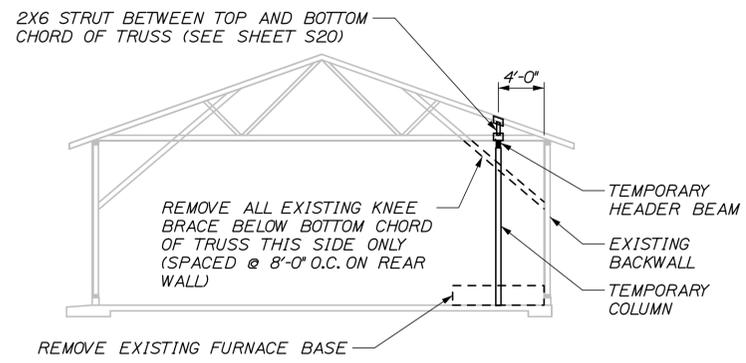
1. EXCAVATE AND REMOVE EXISTING OIL WATER SEPARATOR TANK. REPLACE WITH NEW TANK IN NEW LOCATION. SEE OIL WATER SEPARATOR TANK DETAILS ON SHEET T3 FOR MORE INFORMATION.
2. REMOVE SHEATHING ON WALLS AND BELOW TRUSS TO ALLOW ACCESS TO STRUCTURAL COMPONENTS.
3. REMOVE EXISTING PARTITION WALL, CHIMNEY, CONCRETE FURNACE BASE, FURNACE, AND DUCT WORK.
4. LOCATE EXISTING STUDS IN BACK WALL AND INSTALL TEMPORARY COLUMNS OFFSET TO STUDS ACCORDING TO THE DETAILS ON THE STRUCTURAL PLANS. REMOVE EXISTING KNEE BRACE TO THE BOTTOM OF THE TRUSS AT LOCATIONS SHOWN ON THE STRUCTURAL PLANS. CEILING SHEATHING SHALL BE PATCHED AT REMOVED KNEE BRACE LOCATIONS.
5. INSTALL TEMPORARY HEADER BEAM TIGHTLY BENEATH EXISTING TRUSSES. INSTALL TEMPORARY STRUTS BETWEEN BOTTOM AND TOP CHORDS OF THE EXISTING TRUSS AS SHOWN ON THE STRUCTURAL PLANS. ALL MODIFICATION WORK COMPLETED WHILE THE TEMPORARY SUPPORT IS IN PLACE SHALL BE COMPLETED WITH ONLY STRUCTURAL DEAD LOAD ON THE ROOF. DO NOT PERFORM THIS WORK WHEN THE ROOF IS SUBJECT TO SNOW OR LIVE LOAD CONDITIONS.
6. REMOVE EXISTING BACKWALL, CURB AND PORTION OF THE ROOF AS SHOWN IN THE STRUCTURAL PLANS TO CONSTRUCT PROPOSED EXTENSION. PORTIONS OF THE BACK WALL, CURB, AND ROOF THAT ARE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
7. LAYOUT AND PLACE NEW CONCRETE SLAB-ON-GRADE AND CURB TO MATCH EXISTING FLOOR. SLOPE NEW FLOOR TO MATCH EXISTING DRAINAGE.
8. INSTALL NEW COLUMNS AND HEADER BEAMS ACCORDING TO THE DETAILS IN THE STRUCTURAL PLANS. PAINT NEW COLUMNS SAFETY ORANGE TO A HEIGHT OF 8' TO ENHANCE VISIBILITY.
9. CONSTRUCT NEW BACKWALL AND ROOF. TIE INTO AND MATCH EXISTING WALL CONSTRUCTION AND ROOF PITCH.
10. REMOVE TEMPORARY SUPPORT.
11. REMOVE ALL EXISTING SHINGLES, INSPECT ROOF SHEATHING, REPLACE ANY ROTTED SHEATHING OR DAMAGED WATERPROOFING. INSTALL NEW PREFORMED METAL ROOFING ON EXISTING AND NEW ROOF. NEW UNDERLAYMENT SHALL BE INSTALLED AT ALL LOCATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
12. REMOVE ALL EXISTING SIDING, INSPECT WALL SHEATHING, REPLACE ANY ROTTED SHEATHING. REPLACEMENT OF ROTTED SHEATHING SHALL BE PAID PER SHEATHING PAY ITEM. INSTALL NEW PREFORMED METAL SIDING ON EXISTING AND NEW WALLS.
13. INSTALL ELECTRICAL CONDUITS AND LED LIGHTS AT LOCATIONS AS DESCRIBED IN THE ELECTRICAL SPECIFICATIONS.
14. INSTALL NEW FURNACE UNITS AND DUCT WORK AS SHOWN ON THE MECHANICAL PLANS AND INSTALL DIRECT VENT OUT THE PROPOSED BACKWALL.

**NOTES:**

1. FOR CROSBY KEY PLAN SEE SHEET S8.
2. SEE SHEET S19 AND S20 FOR TEMPORARY COLUMN AND HEADER DETAILS.



**SECTION A-A**  
SCALE: 1/8" = 1'-0"



**SECTION B-B**  
SCALE: 1/8" = 1'-0"  
EXISTING CHIMNEY NOT SHOWN FOR CLARITY

Filename: 006\_Temp\_Support\_Details\_Crosby\_1.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

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340 County Road, Suite 6-C  
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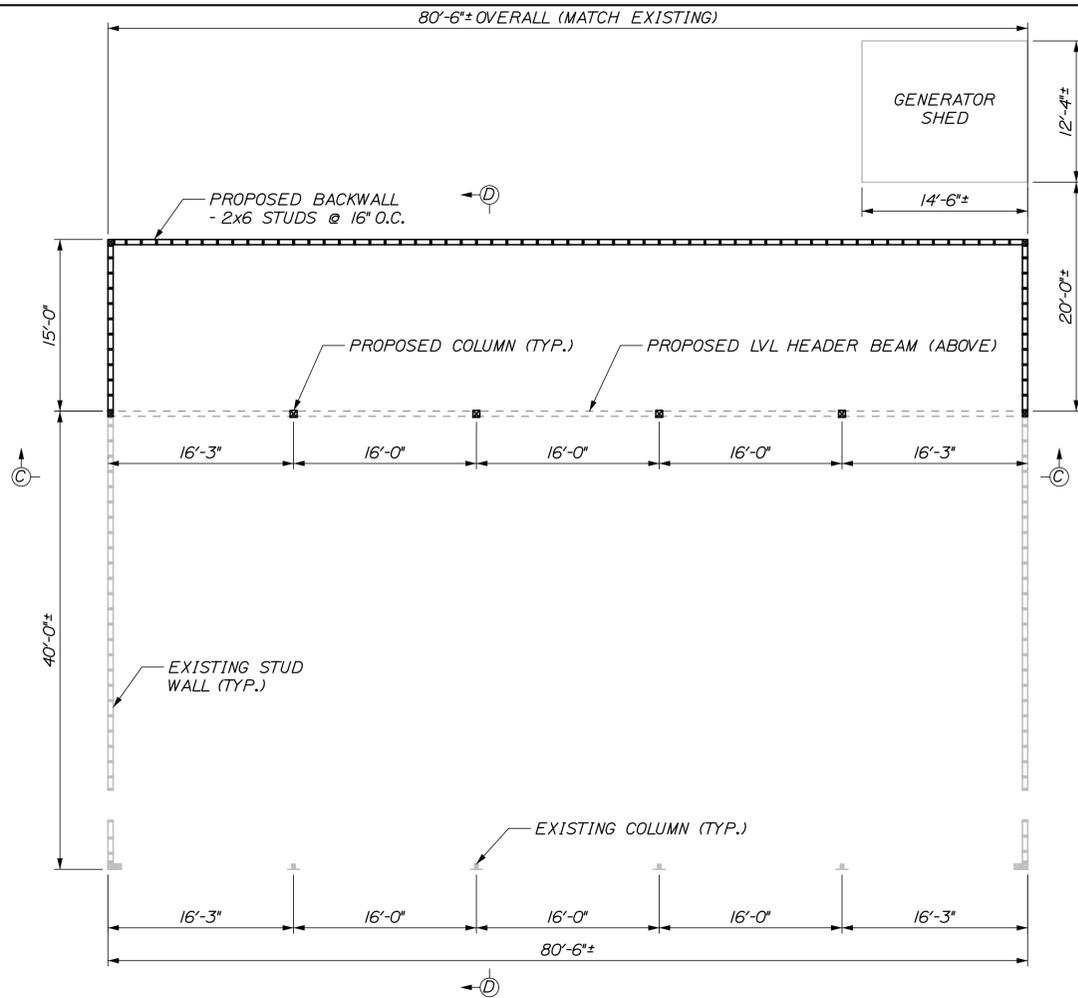
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

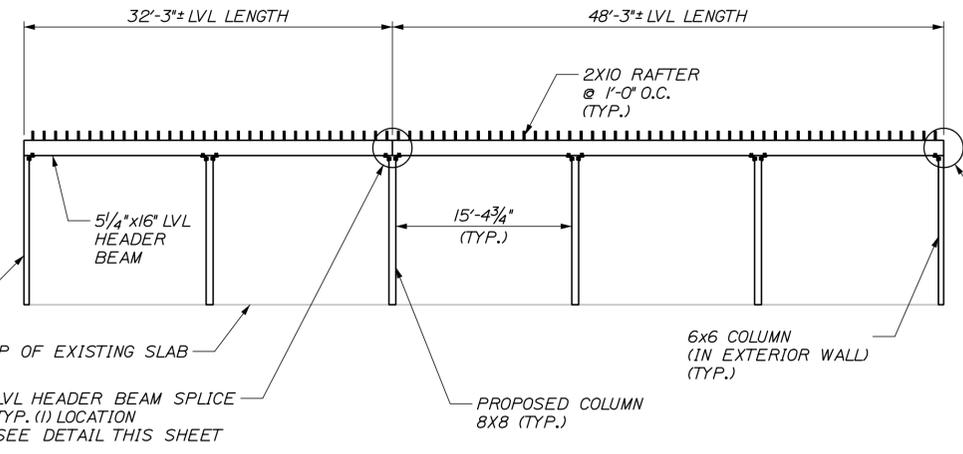
MAINTENANCE GARAGE EXTENSIONS  
TEMPORARY SUPPORT DETAILS  
(CROSBY #1)

SHEET NUMBER: S5  
CONTRACT: 2018.23  
6 OF 58

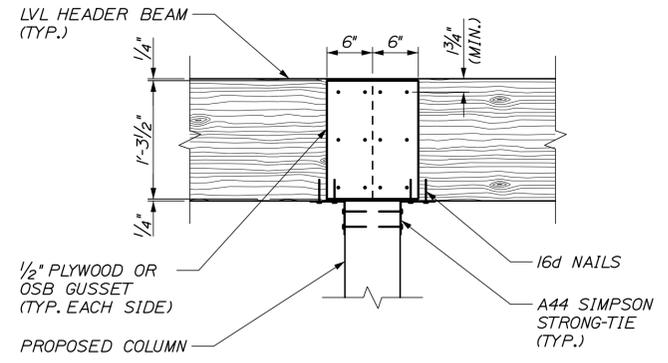
Date: 11/12/2018



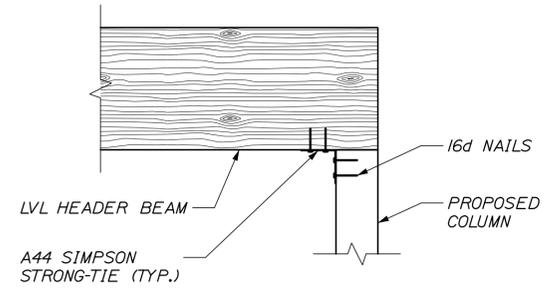
**PROPOSED FRAMING PLAN VIEW**  
SCALE: 1/8" = 1'-0"



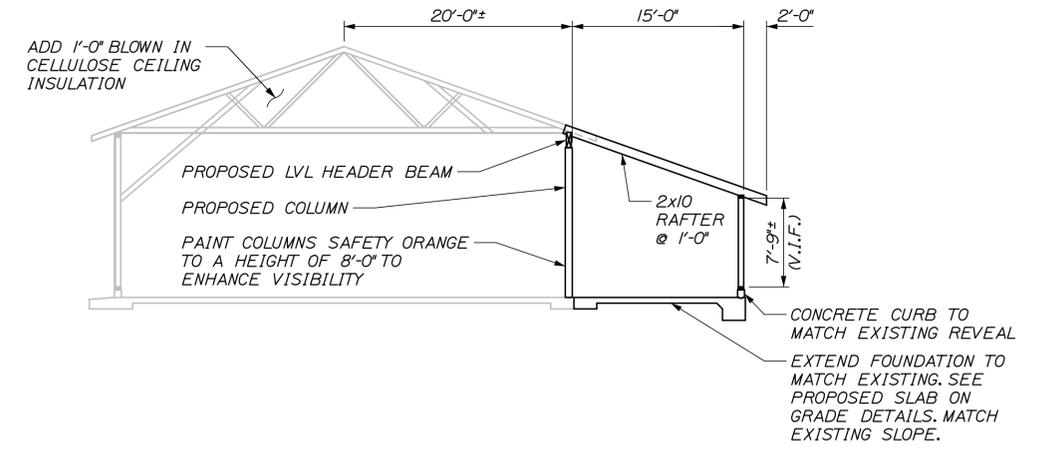
**SECTION C-C**  
SCALE: 1/8" = 1'-0"  
TOP CHORD OF TRUSS NOT SHOWN FOR CLARITY



**LVL HEADER BEAM SPLICE**  
SCALE: 1" = 1'-0"



**LVL HEADER BEAM END CONNECTION**  
SCALE: 1" = 1'-0"



**SECTION D-D**  
SCALE: 1/8" = 1'-0"  
SHEATHING NOT SHOWN FOR CLARITY

- NOTES:**
- SEE SHEET S21, S22, AND S23 FOR PROPOSED SLAB-ON-GRADE DETAILS.
  - SEE SHEET S24 FOR PROPOSED COLUMN AND HEADER DETAILS.

Scale:		Designed by:	
No.	Revision	By	Date

<b>HNTB</b>			
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	BRG	11\17	Checked
Drawn	ERB	11\17	In Charge of

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

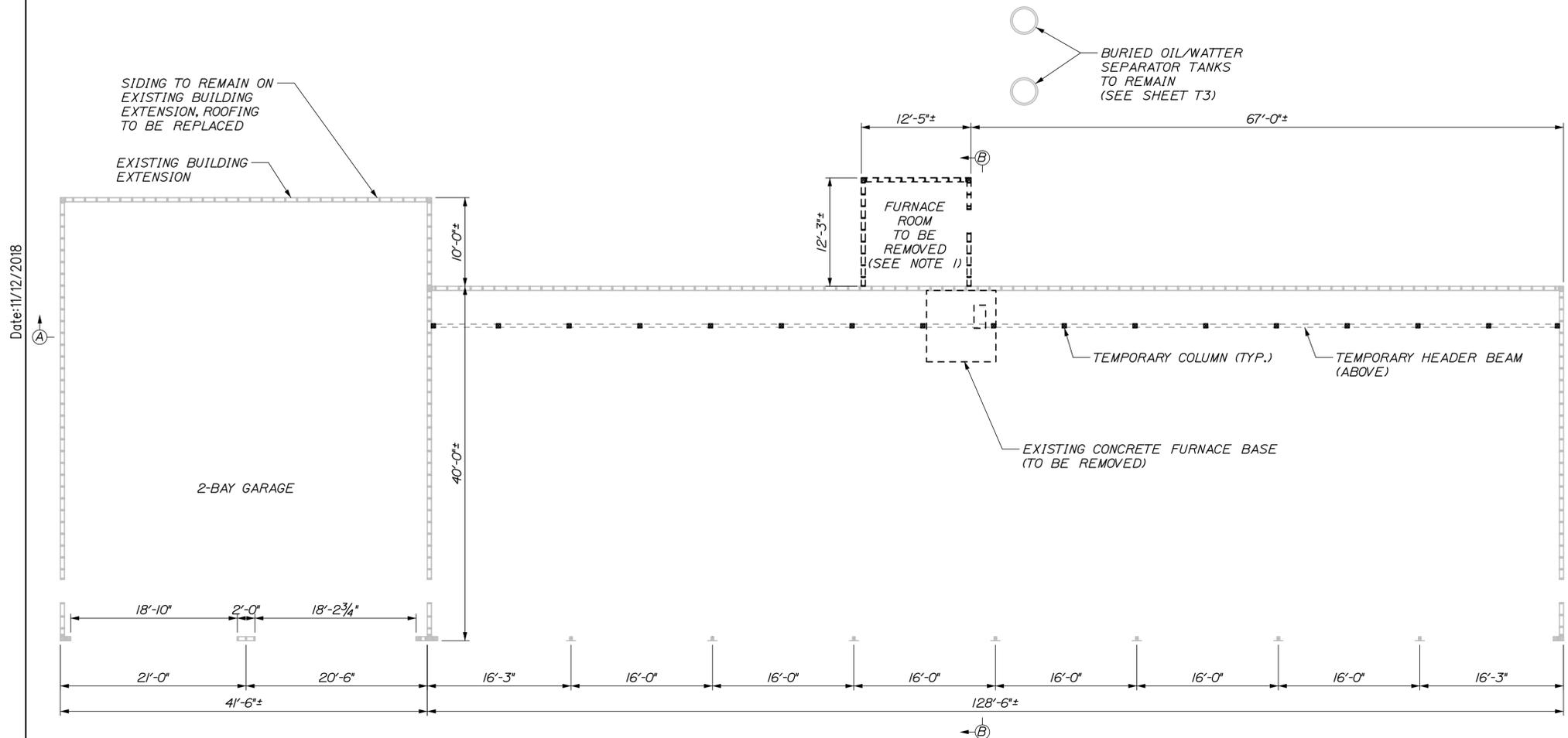
MAINTENANCE GARAGE EXTENSIONS

PROPOSED MODIFICATION DETAILS  
(CROSBY #1)

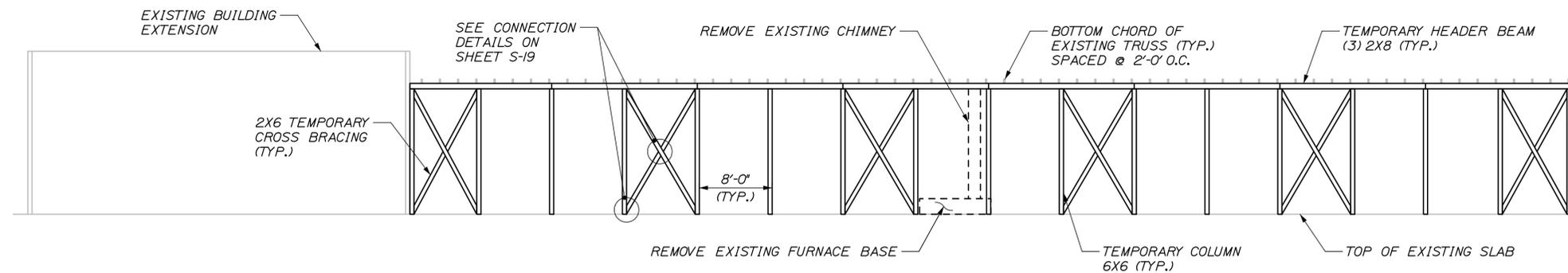
SHEET NUMBER: S6  
7 OF 58

CONTRACT: 2018.23

Date: 11/12/2018



EXISTING FRAMING PLAN AND TEMPORARY SUPPORT PLAN VIEW  
SCALE: 1/8" = 1'-0"



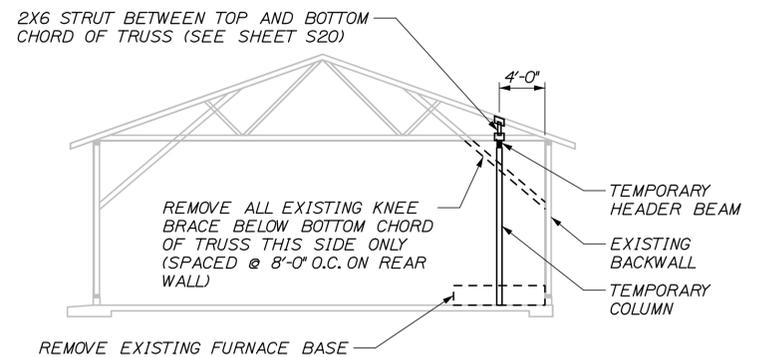
SECTION A-A  
SCALE: 1/8" = 1'-0"

**GENERAL PROCEDURE**

1. REMOVE SHEATHING ON WALLS AND BELOW TRUSS TO ALLOW ACCESS TO STRUCTURAL COMPONENTS.
2. REMOVE EXISTING CHIMNEY, CONCRETE FURNACE BASE, FURNACE, AND DUCT WORK.
3. LOCATE EXISTING STUDS IN BACK WALL AND INSTALL TEMPORARY COLUMNS OFFSET TO STUDS ACCORDING TO THE DETAILS ON THE STRUCTURAL PLANS. REMOVE EXISTING KNEE BRACE TO THE BOTTOM OF THE TRUSS AT LOCATIONS SHOWN ON THE STRUCTURAL PLANS. CEILING SHEATHING SHALL BE PATCHED AT REMOVED KNEE BRACE LOCATIONS.
4. INSTALL TEMPORARY HEADER BEAM TIGHTLY BENEATH EXISTING TRUSSES. INSTALL TEMPORARY STRUTS BETWEEN BOTTOM AND TOP CHORDS OF THE EXISTING TRUSS AS SHOWN ON THE STRUCTURAL PLANS. ALL MODIFICATION WORK COMPLETED WHILE THE TEMPORARY SUPPORT IS IN PLACE SHALL BE COMPLETED WITH ONLY STRUCTURAL DEAD LOAD ON THE ROOF. DO NOT PERFORM THIS WORK WHEN THE ROOF IS SUBJECT TO SNOW OR LIVE LOAD CONDITIONS.
5. REMOVE EXISTING BACKWALL, CURB AND PORTION OF THE ROOF AS SHOWN IN THE STRUCTURAL PLANS TO CONSTRUCT PROPOSED EXTENSION. PORTIONS OF THE BACK WALL, CURB, AND ROOF THAT ARE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
6. LAYOUT AND PLACE NEW CONCRETE SLAB-ON-GRADE AND CURB TO MATCH EXISTING FLOOR. SLOPE NEW FLOOR TO MATCH EXISTING DRAINAGE.
7. INSTALL NEW COLUMNS AND HEADER BEAMS ACCORDING TO THE DETAILS IN THE STRUCTURAL PLANS. PAINT NEW COLUMNS SAFETY ORANGE TO A HEIGHT OF 8' TO ENHANCE VISIBILITY.
8. CONSTRUCT NEW BACKWALL AND ROOF. TIE INTO AND MATCH EXISTING WALL CONSTRUCTION AND ROOF PITCH.
9. REMOVE TEMPORARY SUPPORT.
10. REMOVE ALL EXISTING SHINGLES INCLUDING EXISTING BUILDING EXTENSION, INSPECT ROOF SHEATHING, REPLACE ANY ROTTED SHEATHING OR DAMAGED WATERPROOFING. INSTALL NEW PREFORMED METAL ROOFING ON EXISTING AND NEW ROOF. NEW UNDERLAYMENT SHALL BE INSTALLED AT ALL LOCATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
11. REMOVE ALL EXISTING SIDING, INSPECT WALL SHEATHING, REPLACE ANY ROTTED SHEATHING. REPLACEMENT OF ROTTED SHEATHING SHALL BE PAID PER SHEATHING PAY ITEM. INSTALL NEW PREFORMED METAL SIDING ON EXISTING AND NEW WALLS. SIDING SHALL NOT BE REMOVED ON THE EXISTING 2-BAY GARAGE.
12. INSTALL ELECTRICAL CONDUITS AND LED LIGHTS AT LOCATIONS AS DESCRIBED IN THE ELECTRICAL SPECIFICATIONS.
13. INSTALL NEW FURNACE UNITS AND DUCT WORK AS SHOWN ON THE MECHANICAL PLANS AND INSTALL DIRECT VENT OUT THE PROPOSED BACKWALL.

**NOTES:**

1. CONTRACTOR TO REMOVE AND STORE FURNACE WHICH SHALL REMAIN THE PROPERTY OF MAIN TURNPIKE AUTHORITY. DEMOLISH BUILDING AFTER FURNACE REMOVAL.
2. FOR CROSBY KEY PLAN SEE SHEET S8.
3. SEE SHEET S19 AND S20 FOR TEMPORARY COLUMN AND HEADER DETAILS.



SECTION B-B  
SCALE: 1/8" = 1'-0"  
EXISTING CHIMNEY AND FURNACE ROOM NOT SHOWN FOR CLARITY

Filename: 008\_Temp\_Support\_Details\_Crosby\_2.dgn

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	BRG	11\17	Checked RBM 11\17
Drawn	ERB	11\17	In Charge of RAL 11\17

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340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
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**MAINE TURNPIKE**

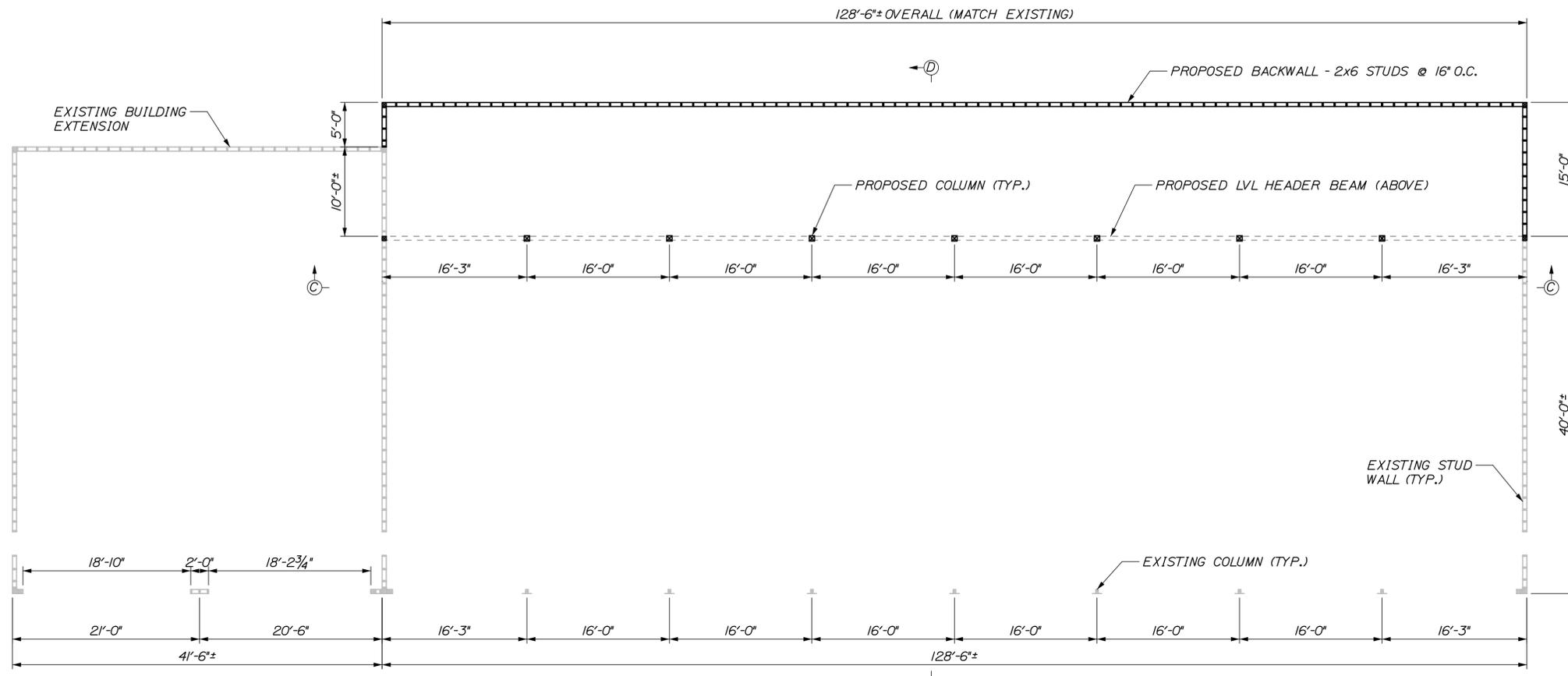
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

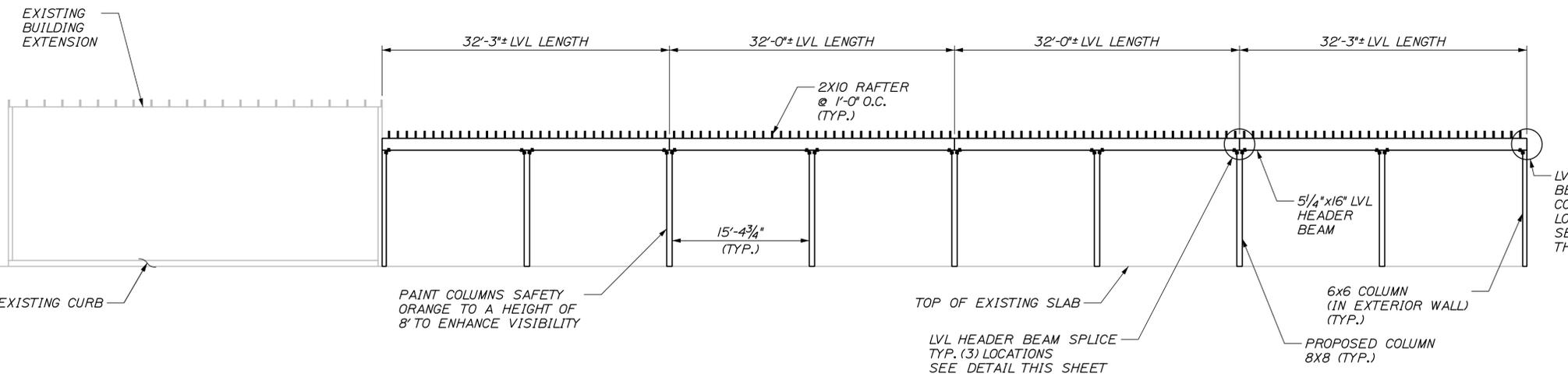
MAINTENANCE GARAGE EXTENSIONS  
TEMPORARY SUPPORT DETAILS  
(CROSBY #2)

SHEET NUMBER: S7  
CONTRACT: 2018.23  
8 OF 58

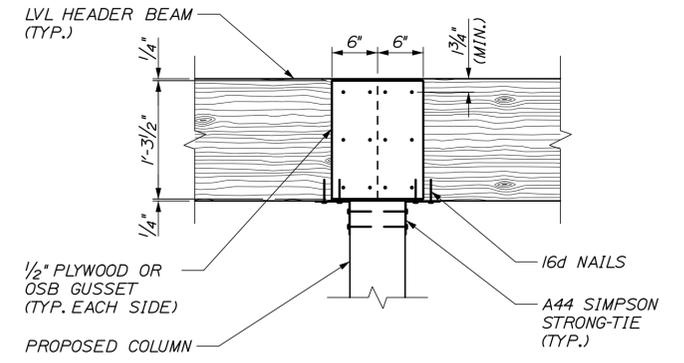
Date: 11/12/2018



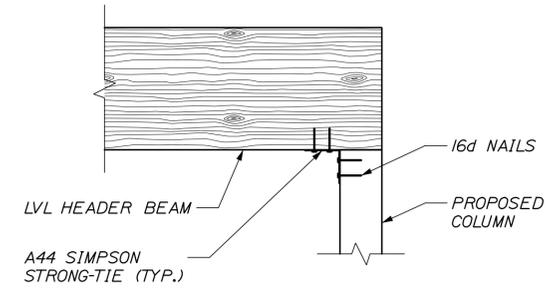
**PROPOSED FRAMING PLAN VIEW**  
SCALE: 1/8" = 1'-0"



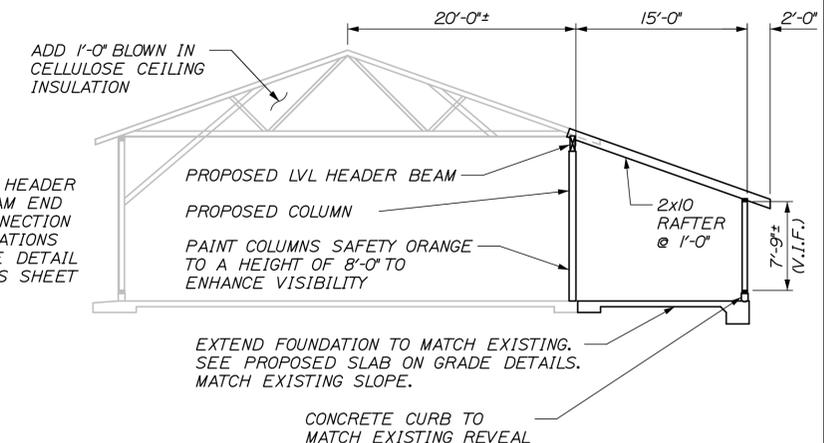
**SECTION C-C**  
SCALE: 1/8" = 1'-0"  
TOP CHORD OF TRUSS NOT SHOWN FOR CLARITY



**LVL HEADER BEAM SPLICE**  
SCALE: 1" = 1'-0"



**LVL HEADER BEAM END CONNECTION**  
SCALE: 1" = 1'-0"



**SECTION D-D**  
SCALE: 1/8" = 1'-0"  
SHEATHING NOT SHOWN FOR CLARITY

- NOTES:**
- SEE SHEET S21, S22, AND S23 FOR PROPOSED SLAB-ON-GRADE DETAILS.
  - SEE SHEET S24 FOR PROPOSED COLUMN AND HEADER DETAILS.

No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

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340 County Road, Suite 6-C  
Westbrook, ME 04092  
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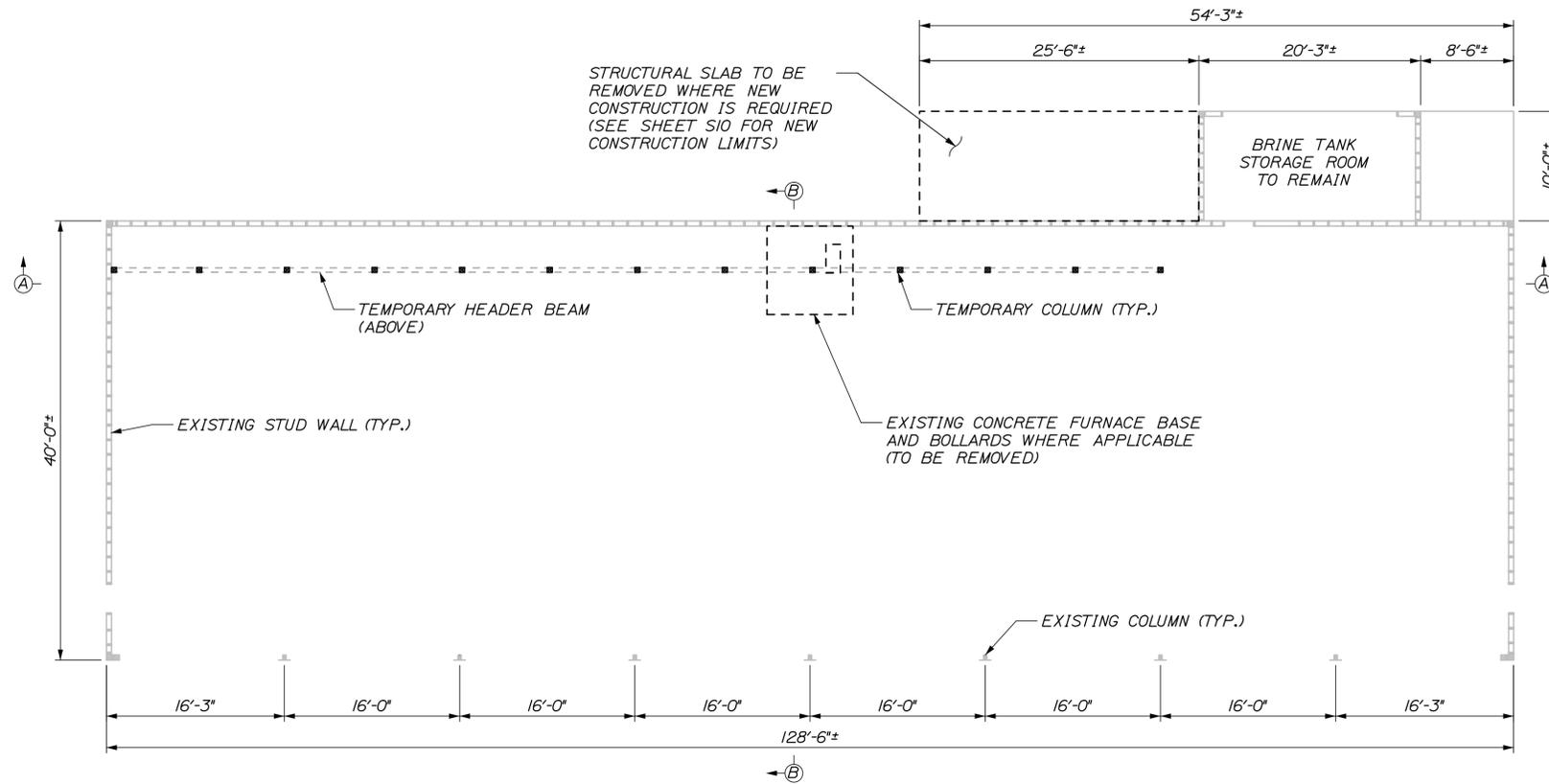
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

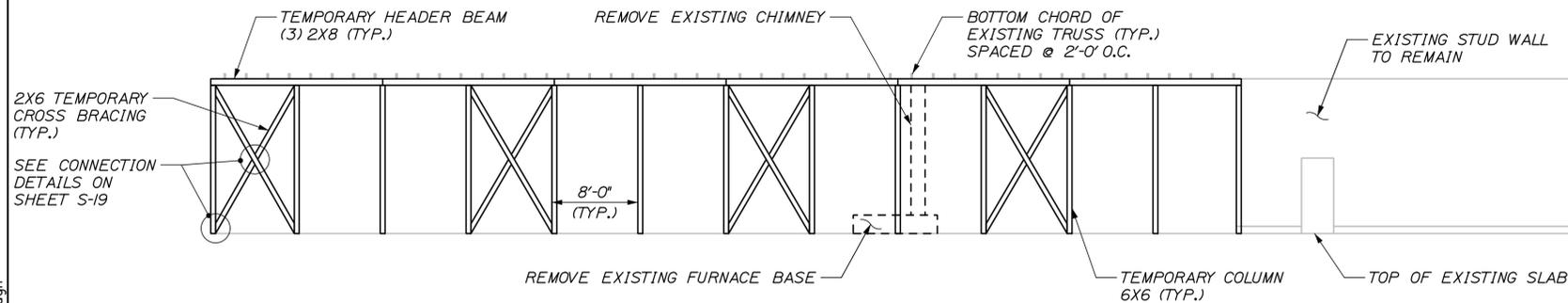
MAINTENANCE GARAGE EXTENSIONS  
PROPOSED MODIFICATION DETAILS  
(CROSBY #2)

SHEET NUMBER: S8  
CONTRACT: 2018.23  
9 OF 58

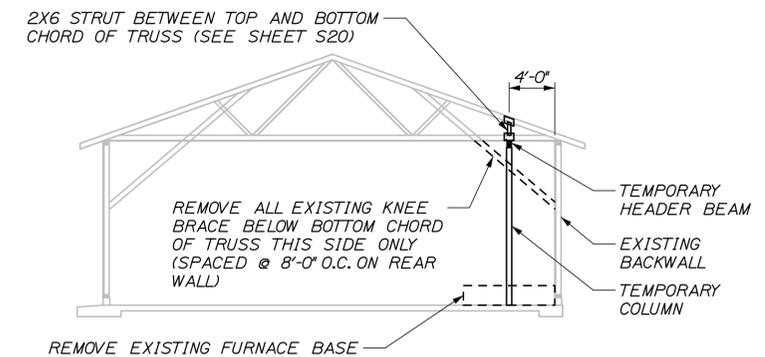
Date: 11/12/2018



EXISTING FRAMING PLAN AND TEMPORARY SUPPORT PLAN VIEW  
SCALE: 1/8" = 1'-0"



SECTION A-A  
SCALE: 1/8" = 1'-0"



SECTION B-B  
SCALE: 1/8" = 1'-0"  
EXISTING CHIMNEY NOT SHOWN FOR CLARITY

**GENERAL PROCEDURE**

1. REMOVE SHEATHING ON WALLS AND BELOW TRUSS TO ALLOW ACCESS TO STRUCTURAL COMPONENTS.
2. REMOVE EXISTING CHIMNEY, CONCRETE FURNACE BASE, FURNACE, AND DUCT WORK.
3. LOCATE EXISTING STUDS IN BACK WALL AND INSTALL TEMPORARY COLUMNS OFFSET TO STUDS ACCORDING TO THE DETAILS ON THE STRUCTURAL PLANS. REMOVE EXISTING KNEE BRACE TO THE BOTTOM OF THE TRUSS AT LOCATIONS SHOWN ON THE STRUCTURAL PLANS. CEILING SHEATHING SHALL BE PATCHED AT REMOVED KNEE BRACE LOCATIONS.
4. INSTALL TEMPORARY HEADER BEAM TIGHTLY BENEATH EXISTING TRUSSES. INSTALL TEMPORARY STRUTS BETWEEN BOTTOM AND TOP CHORDS OF THE EXISTING TRUSS AS SHOWN ON THE STRUCTURAL PLANS. ALL MODIFICATION WORK COMPLETED WHILE THE TEMPORARY SUPPORT IS IN PLACE SHALL BE COMPLETED WITH ONLY STRUCTURAL DEAD LOAD ON THE ROOF. DO NOT PERFORM THIS WORK WHEN THE ROOF IS SUBJECT TO SNOW OR LIVE LOAD CONDITIONS.
5. REMOVE EXISTING BACKWALL, CURB AND PORTION OF THE ROOF AS SHOWN IN THE STRUCTURAL PLANS TO CONSTRUCT PROPOSED EXTENSION. PORTIONS OF THE BACK WALL, CURB, AND ROOF THAT ARE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
6. LAYOUT AND PLACE NEW CONCRETE SLAB-ON-GRADE AND CURB TO MATCH EXISTING FLOOR. SLOPE NEW FLOOR TO MATCH EXISTING DRAINAGE.
7. INSTALL NEW COLUMNS AND HEADER BEAMS ACCORDING TO THE DETAILS IN THE STRUCTURAL PLANS. PAINT NEW COLUMNS SAFETY ORANGE TO A HEIGHT OF 8' TO ENHANCE VISIBILITY.
8. CONSTRUCT NEW BACKWALL AND ROOF. TIE INTO AND MATCH EXISTING WALL CONSTRUCTION AND ROOF PITCH.
9. REMOVE TEMPORARY SUPPORT.
10. REMOVE ALL EXISTING SHINGLES, INSPECT ROOF SHEATHING, REPLACE ANY ROTTED SHEATHING OR DAMAGED WATERPROOFING. INSTALL NEW PREFORMED METAL ROOFING ON EXISTING AND NEW ROOF. NEW UNDERLAYMENT SHALL BE INSTALLED AT ALL LOCATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
11. REMOVE ALL EXISTING SIDING, INSPECT WALL SHEATHING, REPLACE ANY ROTTED SHEATHING. REPLACEMENT OF ROTTED SHEATHING SHALL BE PAID PER SHEATHING PAY ITEM. INSTALL NEW PREFORMED METAL SIDING ON EXISTING AND NEW WALLS.
12. INSTALL ELECTRICAL CONDUITS AND LED LIGHTS AT LOCATIONS AS DESCRIBED IN THE ELECTRICAL SPECIFICATIONS.
13. INSTALL NEW FURNACE UNITS AND DUCT WORK AS SHOWN ON THE MECHANICAL PLANS AND INSTALL DIRECT VENT OUT THE PROPOSED BACKWALL.

**NOTES:**

1. FOR CROSBY KEY PLAN SEE SHEET S8.
2. SEE SHEET S19 AND S20 FOR TEMPORARY COLUMN AND HEADER DETAILS.

Filename: 010\_Temp\_Support\_Details\_Crosby\_3.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

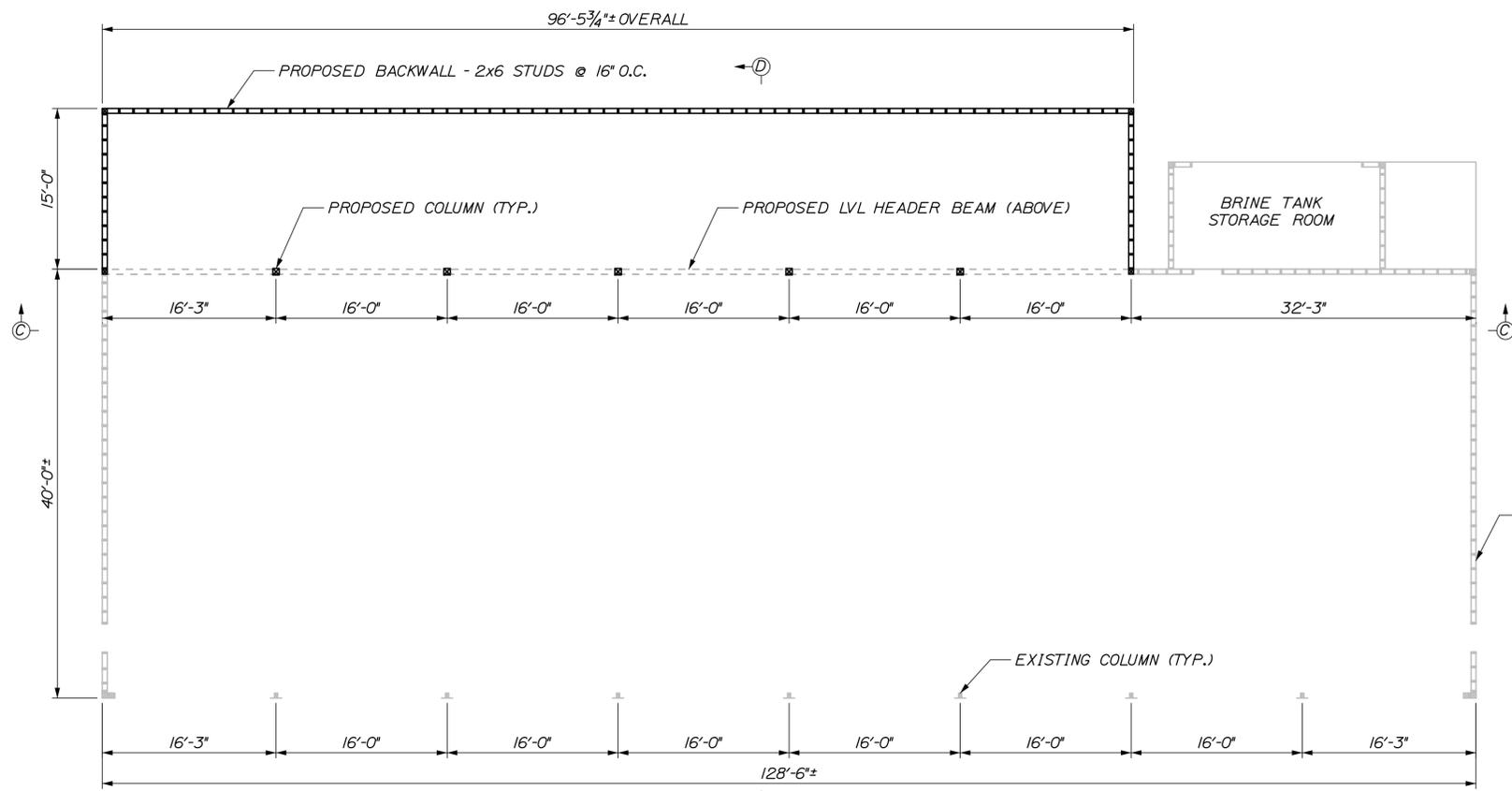
MAINTENANCE GARAGE EXTENSIONS  
TEMPORARY SUPPORT DETAILS  
(CROSBY #3)

SHEET NUMBER: S9  
10 OF 58

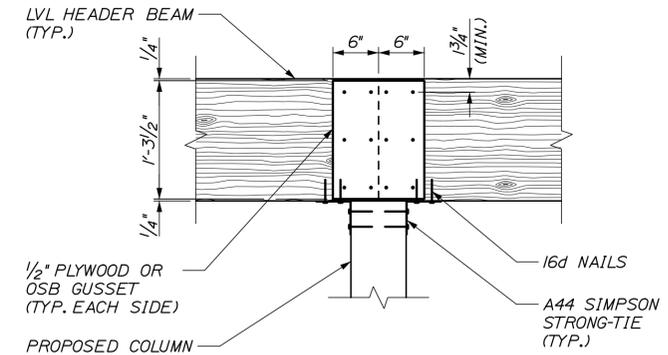
CONTRACT: 2018.23

Date: 11/12/2018

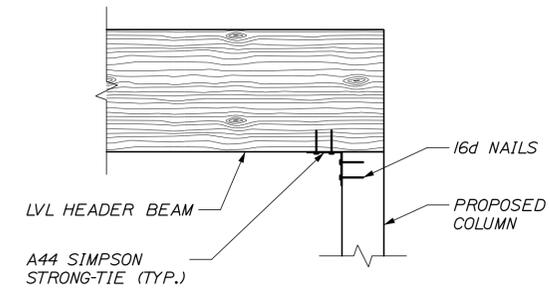
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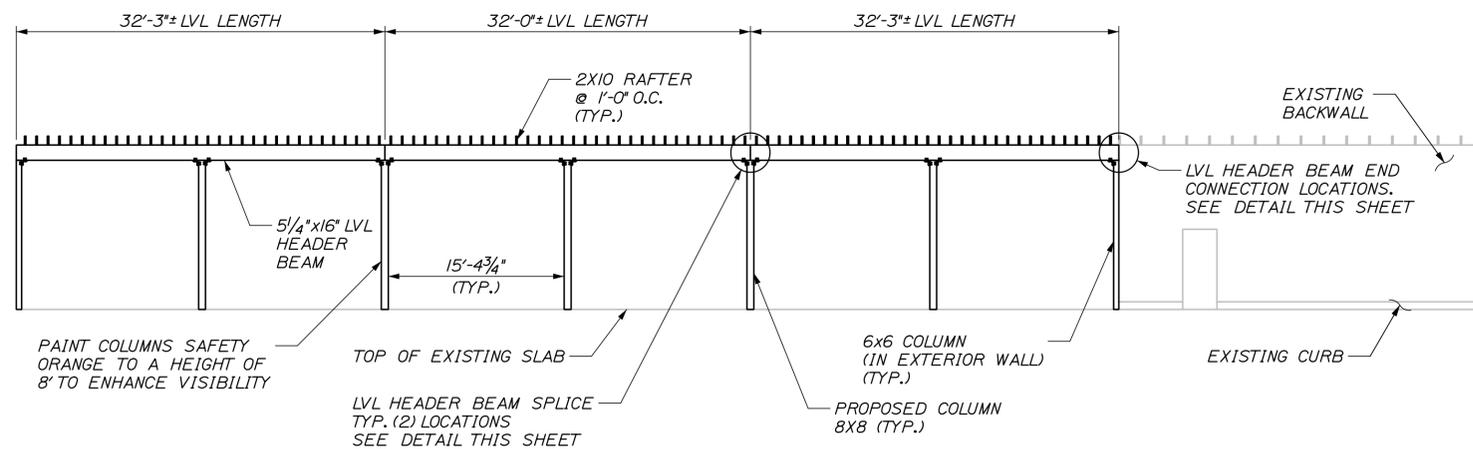
**PROPOSED FRAMING PLAN VIEW**  
SCALE: 1/8" = 1'-0"



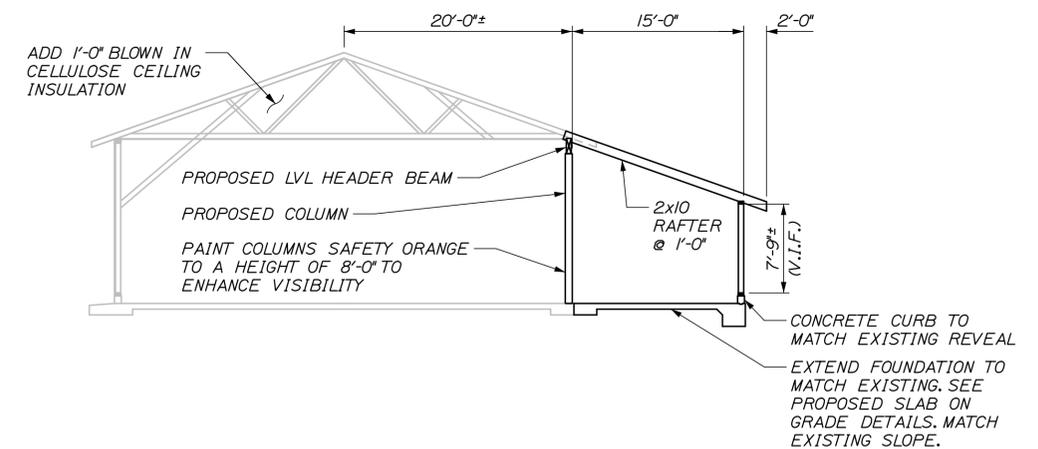
**LVL HEADER BEAM SPLICE**  
SCALE: 1" = 1'-0"



**LVL HEADER BEAM END CONNECTION**  
SCALE: 1" = 1'-0"



**SECTION C-C**  
SCALE: 1/8" = 1'-0"  
TOP CHORD OF TRUSS NOT SHOWN FOR CLARITY



**SECTION D-D**  
SCALE: 1/8" = 1'-0"  
SHEATHING NOT SHOWN FOR CLARITY

**NOTES:**

- SEE SHEET S21, S22, AND S23 FOR PROPOSED SLAB-ON-GRADE DETAILS.
- SEE SHEET S24 FOR PROPOSED COLUMN AND HEADER DETAILS.

Scale:		Designed by:	
No.	Revision	By	Date

<b>HNTB</b>			
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	BRG	11\17	Checked
Drawn	ERB	11\17	In Charge of

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340 County Road, Suite 6-C  
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FAX (207) 228-0909

THE GOLD STAR  
MEMORIAL HIGHWAY

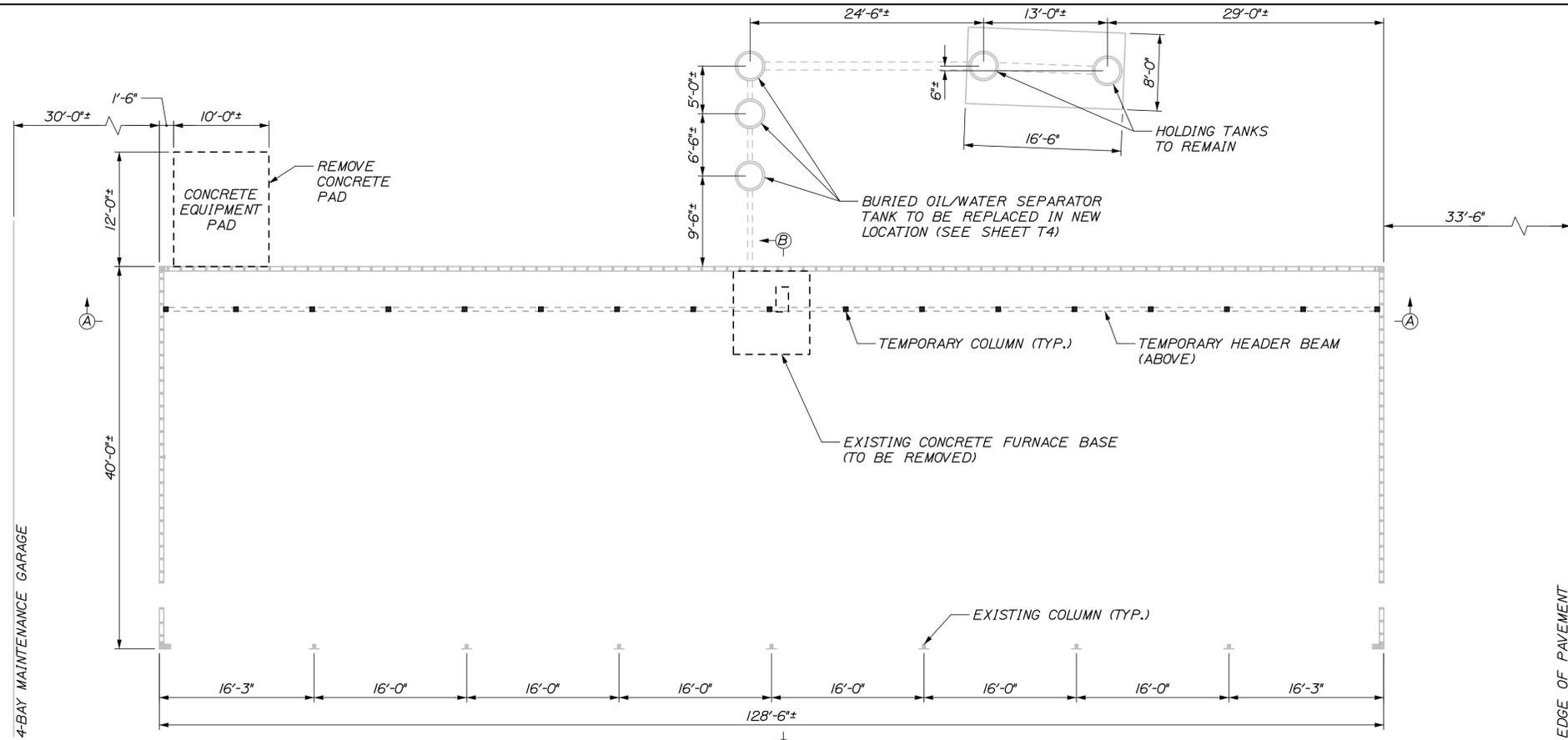
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

PROPOSED MODIFICATION DETAILS  
(CROSBY #3)

SHEET NUMBER: S10  
CONTRACT: 2018.23  
11 OF 58

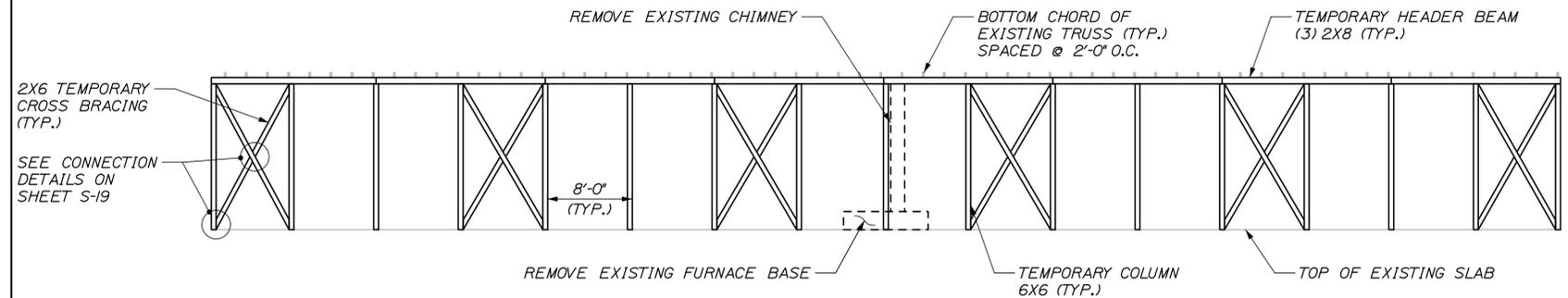
Date: 11/12/2018



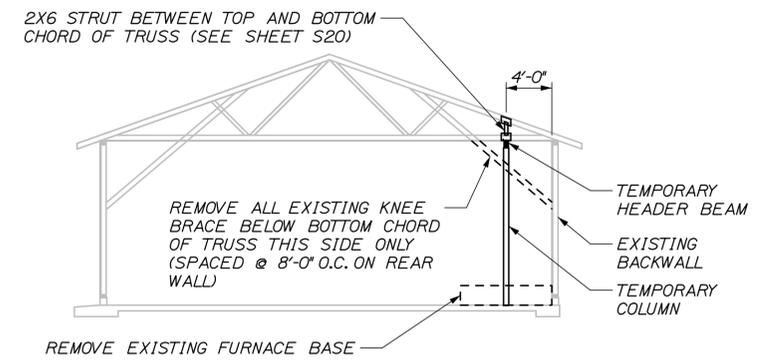
**EXISTING FRAMING PLAN AND TEMPORARY SUPPORT PLAN VIEW**  
SCALE: 1/8" = 1'-0"

**GENERAL PROCEDURE**

1. EXCAVATE AND REMOVE EXISTING OIL WATER SEPARATOR TANK. REPLACE WITH NEW TANK IN NEW LOCATION. SEE OIL WATER SEPARATOR TANK DETAILS ON SHEET T4 FOR MORE INFORMATION.
2. REMOVE SHEATHING ON WALLS AND BELOW TRUSS TO ALLOW ACCESS TO STRUCTURAL COMPONENTS.
3. REMOVE EXISTING CHIMNEY, CONCRETE FURNACE BASE, FURNACE, AND DUCT WORK.
4. LOCATE EXISTING STUDS IN BACK WALL AND INSTALL TEMPORARY COLUMNS OFFSET TO STUDS ACCORDING TO THE DETAILS ON THE STRUCTURAL PLANS. REMOVE EXISTING KNEE BRACE TO THE BOTTOM OF THE TRUSS AT LOCATIONS SHOWN ON THE STRUCTURAL PLANS. CEILING SHEATHING SHALL BE PATCHED AT REMOVED KNEE BRACE LOCATIONS.
5. INSTALL TEMPORARY HEADER BEAM TIGHTLY BENEATH EXISTING TRUSSES. INSTALL TEMPORARY STRUTS BETWEEN BOTTOM AND TOP CHORDS OF THE EXISTING TRUSS AS SHOWN ON THE STRUCTURAL PLANS. ALL MODIFICATION WORK COMPLETED WHILE THE TEMPORARY SUPPORT IS IN PLACE SHALL BE COMPLETED WITH ONLY STRUCTURAL DEAD LOAD ON THE ROOF. DO NOT PERFORM THIS WORK WHEN THE ROOF IS SUBJECT TO SNOW OR LIVE LOAD CONDITIONS.
6. REMOVE EXISTING BACKWALL, CURB AND PORTION OF THE ROOF AS SHOWN IN THE STRUCTURAL PLANS TO CONSTRUCT PROPOSED EXTENSION. PORTIONS OF THE BACK WALL, CURB, AND ROOF THAT ARE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
7. LAYOUT AND PLACE NEW CONCRETE SLAB-ON-GRADE AND CURB TO MATCH EXISTING FLOOR. SLOPE NEW FLOOR TO MATCH EXISTING DRAINAGE.
8. INSTALL NEW COLUMNS AND HEADER BEAMS ACCORDING TO THE DETAILS IN THE STRUCTURAL PLANS. PAINT NEW COLUMNS SAFETY ORANGE TO A HEIGHT OF 8' TO ENHANCE VISIBILITY.
9. CONSTRUCT NEW BACKWALL AND ROOF. TIE INTO AND MATCH EXISTING WALL CONSTRUCTION AND ROOF PITCH.
10. REMOVE TEMPORARY SUPPORT.
11. REMOVE ALL EXISTING SHINGLES, INSPECT ROOF SHEATHING, REPLACE ANY ROTTED SHEATHING OR DAMAGED WATERPROOFING. INSTALL NEW PREFORMED METAL ROOFING ON EXISTING AND NEW ROOF. NEW UNDERLAYMENT SHALL BE INSTALLED AT ALL LOCATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
12. REMOVE ALL EXISTING SIDING, INSPECT WALL SHEATHING, REPLACE ANY ROTTED SHEATHING. REPLACEMENT OF ROTTED SHEATHING SHALL BE PAID PER SHEATHING PAY ITEM. INSTALL NEW PREFORMED METAL SIDING ON EXISTING AND NEW WALLS.
13. INSTALL ELECTRICAL CONDUITS AND LED LIGHTS AT LOCATIONS AS DESCRIBED IN THE ELECTRICAL SPECIFICATIONS.
14. INSTALL NEW FURNACE UNITS AND DUCT WORK AS SHOWN ON THE MECHANICAL PLANS AND INSTALL DIRECT VENT OUT THE PROPOSED BACKWALL.



**SECTION A-A**  
SCALE: 1/8" = 1'-0"



**SECTION B-B**  
SCALE: 1/8" = 1'-0"  
EXISTING CHIMNEY NOT SHOWN FOR CLARITY

**NOTES:**  
1. SEE SHEET S19 AND S20 FOR TEMPORARY COLUMN AND HEADER DETAILS.

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	BRG	11\17	Checked RBM 11\17
Drawn	ERB	11\17	In Charge of RAL 11\17

**HNTB**

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340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

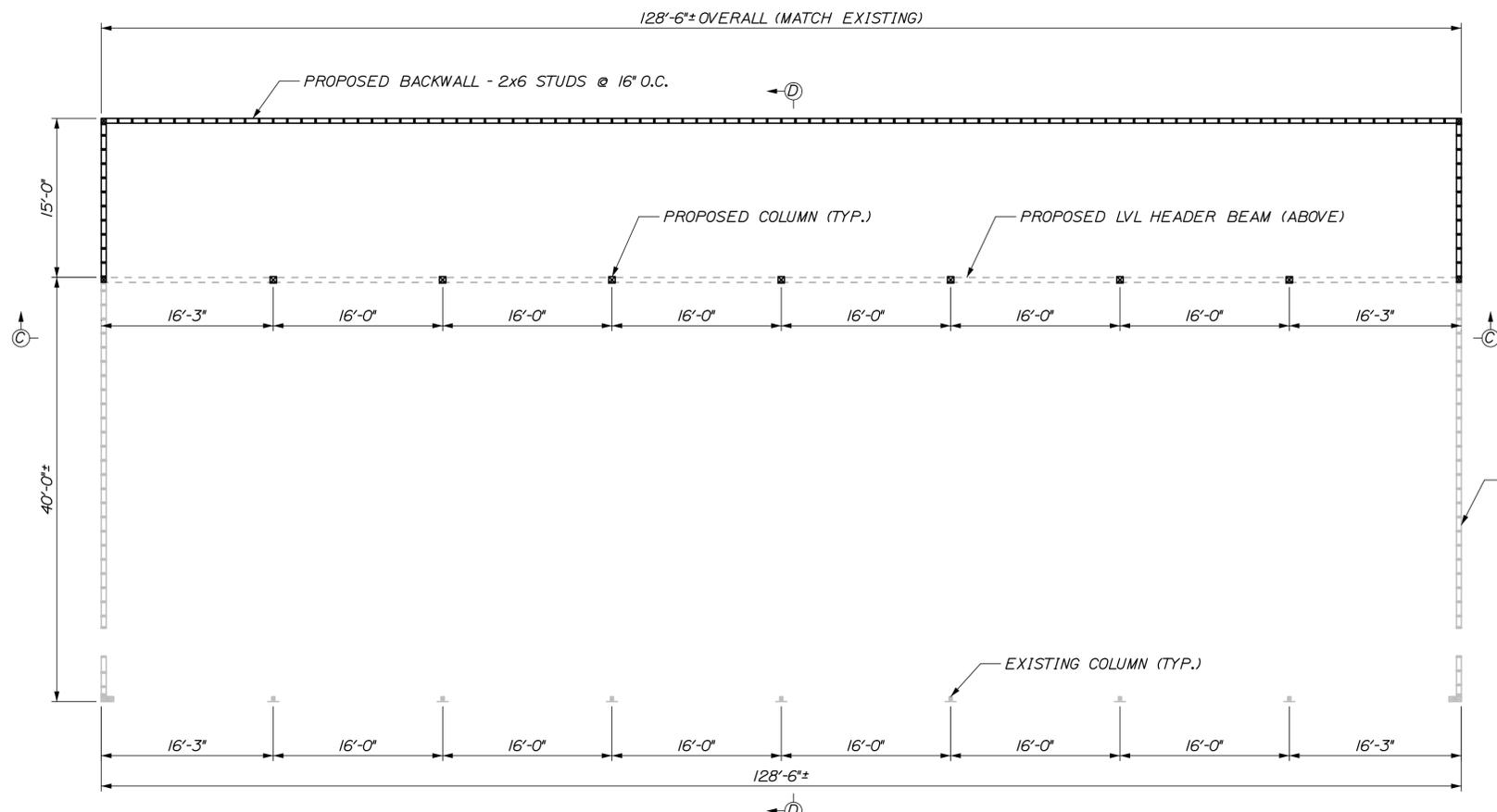
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
TEMPORARY SUPPORT DETAILS  
(GRAY)

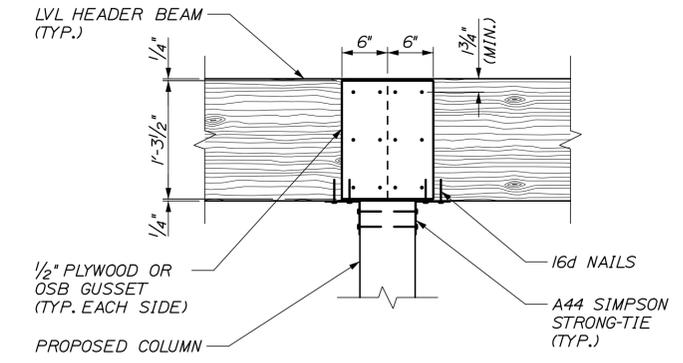
SHEET NUMBER: S11  
CONTRACT: 2018.23  
12 OF 58

Filename: 012\_Temp\_Support\_Details\_Gray.dgn

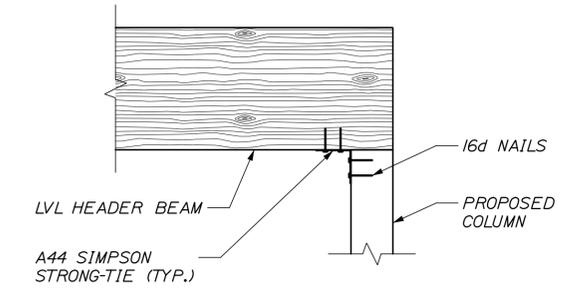
Date: 11/12/2018



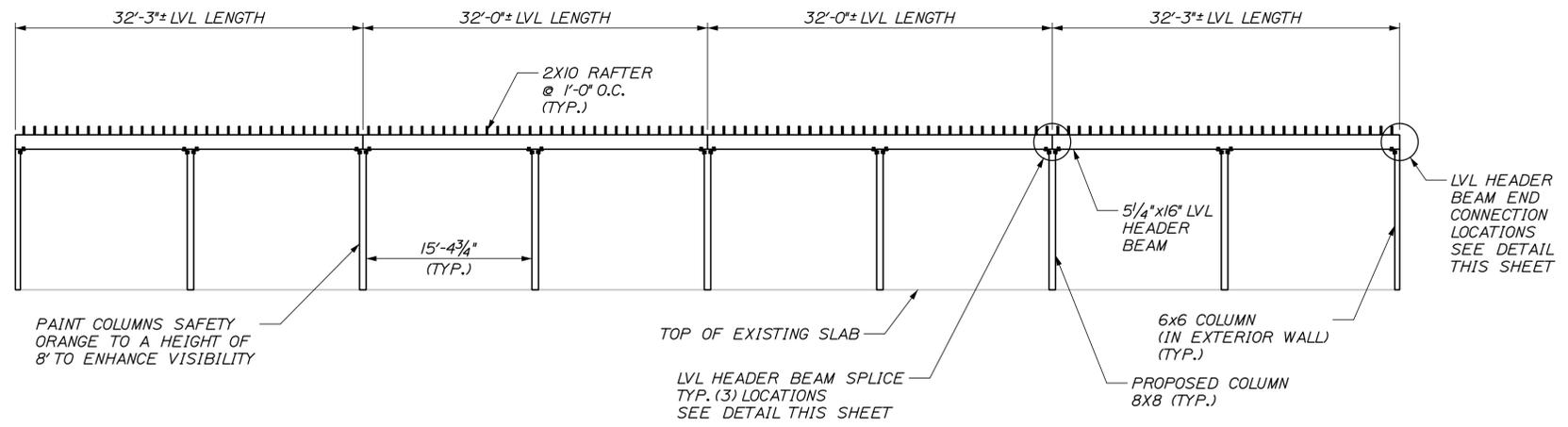
**PROPOSED FRAMING PLAN VIEW**  
SCALE: 1/8" = 1'-0"



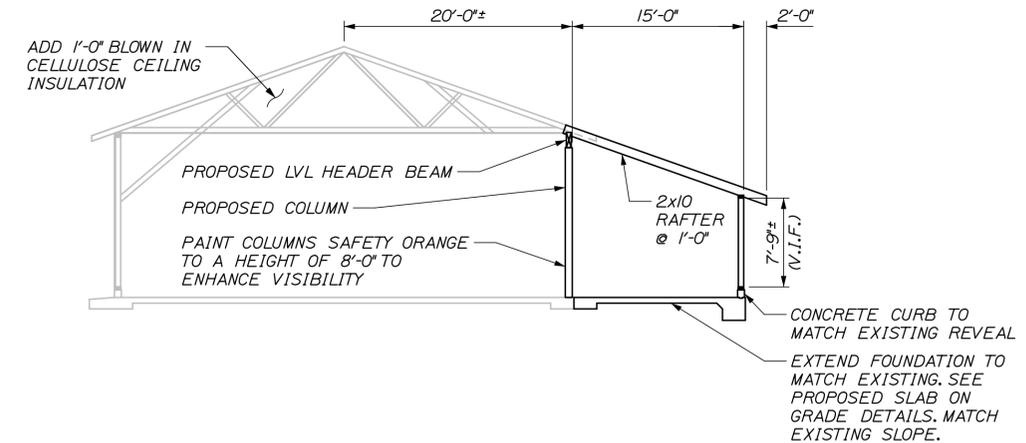
**LVL HEADER BEAM SPLICE**  
SCALE: 1" = 1'-0"



**LVL HEADER BEAM END CONNECTION**  
SCALE: 1" = 1'-0"



**SECTION C-C**  
SCALE: 1/8" = 1'-0"  
TOP CHORD OF TRUSS NOT SHOWN FOR CLARITY



**SECTION D-D**  
SCALE: 1/8" = 1'-0"  
SHEATHING NOT SHOWN FOR CLARITY

- NOTES:**
- SEE SHEET S21, S22, AND S23 FOR PROPOSED SLAB-ON-GRADE DETAILS.
  - SEE SHEET S24 FOR PROPOSED COLUMN AND HEADER DETAILS.

Scale:		Designed by:	
No.	Revision	By	Date

<b>HNTB</b>			
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	By	Date	Checked
	BRG	11\17	RBM
Drawn	By	Date	In Charge of
	ERB	11\17	RAL

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

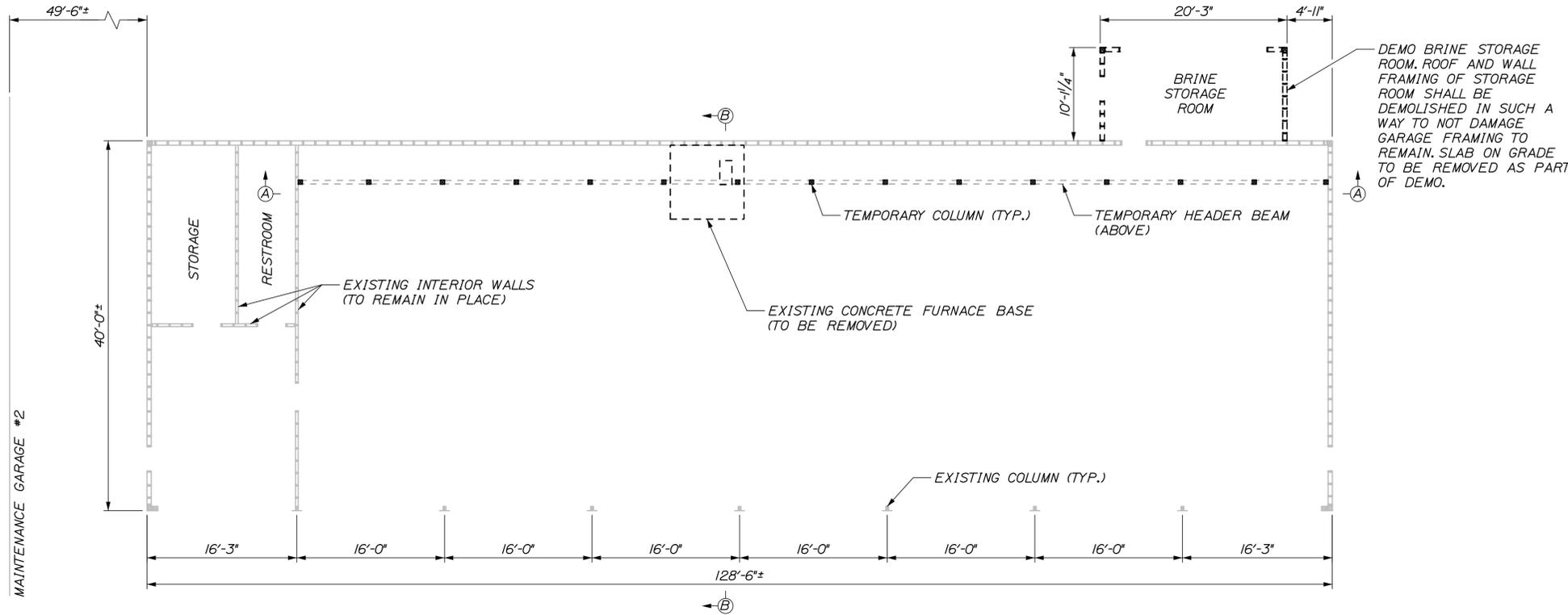
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
PROPOSED MODIFICATION DETAILS  
(GRAY)

SHEET NUMBER: S12  
CONTRACT: 2018.23  
13 OF 58

Filename: 013\_Proposed Modification Details\_Gray.dgn

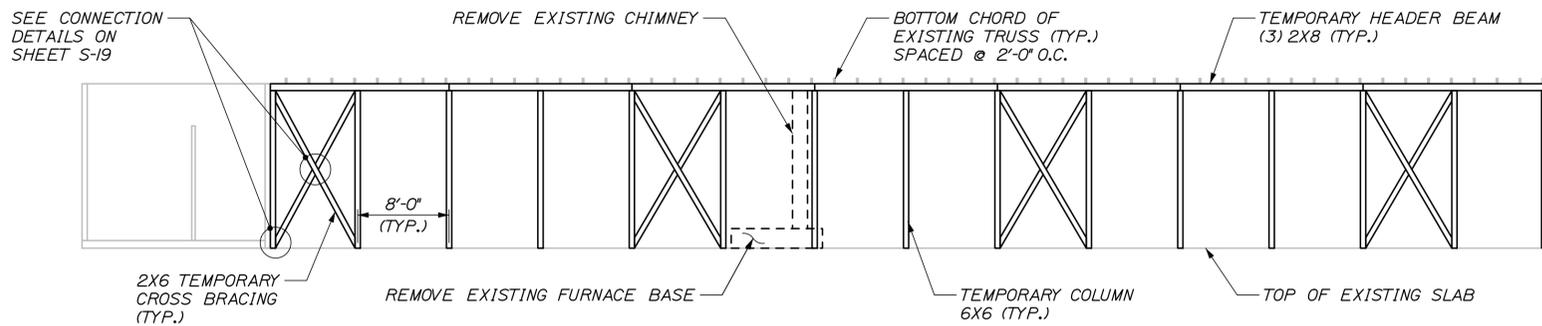
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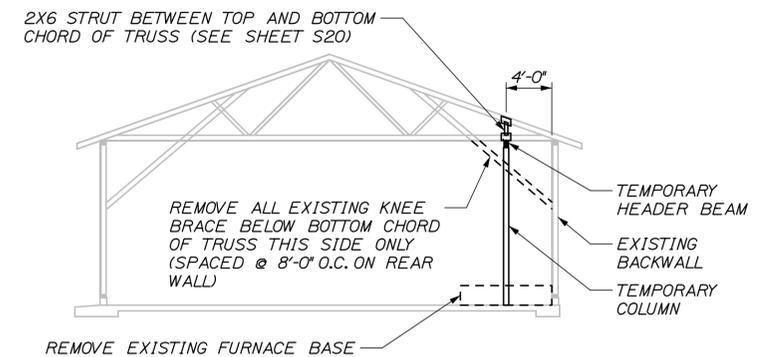
EXISTING FRAMING PLAN AND TEMPORARY SUPPORT PLAN VIEW  
SCALE: 1/8" = 1'-0"

**GENERAL PROCEDURE**

1. REMOVE SHEATHING ON WALLS AND BELOW TRUSS TO ALLOW ACCESS TO STRUCTURAL COMPONENTS.
2. REMOVE EXISTING CHIMNEY, CONCRETE FURNACE BASE, FURNACE, AND DUCT WORK.
3. LOCATE EXISTING STUDS IN BACK WALL AND INSTALL TEMPORARY COLUMNS OFFSET TO STUDS ACCORDING TO THE DETAILS ON THE STRUCTURAL PLANS. REMOVE EXISTING KNEE BRACE TO THE BOTTOM OF THE TRUSS AT LOCATIONS SHOWN ON THE STRUCTURAL PLANS. CEILING SHEATHING SHALL BE PATCHED AT REMOVED KNEE BRACE LOCATIONS.
4. INSTALL TEMPORARY HEADER BEAM TIGHTLY BENEATH EXISTING TRUSSES. INSTALL TEMPORARY STRUTS BETWEEN BOTTOM AND TOP CHORDS OF THE EXISTING TRUSS AS SHOWN ON THE STRUCTURAL PLANS. ALL MODIFICATION WORK COMPLETED WHILE THE TEMPORARY SUPPORT IS IN PLACE SHALL BE COMPLETED WITH ONLY STRUCTURAL DEAD LOAD ON THE ROOF. DO NOT PERFORM THIS WORK WHEN THE ROOF IS SUBJECT TO SNOW OR LIVE LOAD CONDITIONS.
5. REMOVE EXISTING BACKWALL, CURB AND PORTION OF THE ROOF AS SHOWN IN THE STRUCTURAL PLANS TO CONSTRUCT PROPOSED EXTENSION. PORTIONS OF THE BACK WALL, CURB, AND ROOF THAT ARE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
6. LAYOUT AND PLACE NEW CONCRETE SLAB-ON-GRADE AND CURB TO MATCH EXISTING FLOOR. SLOPE NEW FLOOR TO MATCH EXISTING DRAINAGE.
7. INSTALL NEW COLUMNS AND HEADER BEAMS ACCORDING TO THE DETAILS IN THE STRUCTURAL PLANS. PAINT NEW COLUMNS SAFETY ORANGE TO A HEIGHT OF 8' TO ENHANCE VISIBILITY.
8. CONSTRUCT NEW BACKWALL AND ROOF. TIE INTO AND MATCH EXISTING WALL CONSTRUCTION AND ROOF PITCH.
9. REMOVE TEMPORARY SUPPORT.
10. REMOVE ALL EXISTING SHINGLES, INSPECT ROOF SHEATHING, REPLACE ANY ROTTED SHEATHING OR DAMAGED WATERPROOFING. INSTALL NEW PREFORMED METAL ROOFING ON EXISTING AND NEW ROOF. NEW UNDERLAYMENT SHALL BE INSTALLED AT ALL LOCATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
11. REMOVE ALL EXISTING SIDING, INSPECT WALL SHEATHING, REPLACE ANY ROTTED SHEATHING. REPLACEMENT OF ROTTED SHEATHING SHALL BE PAID PER SHEATHING PAY ITEM. INSTALL NEW PREFORMED METAL SIDING ON EXISTING AND NEW WALLS.
12. INSTALL ELECTRICAL CONDUITS AND LED LIGHTS AT LOCATIONS AS DESCRIBED IN THE ELECTRICAL SPECIFICATIONS.
13. INSTALL NEW FURNACE UNITS AND DUCT WORK AS SHOWN ON THE MECHANICAL PLANS AND INSTALL DIRECT VENT OUT THE PROPOSED BACKWALL.



SECTION A-A  
SCALE: 1/8" = 1'-0"



SECTION B-B  
SCALE: 1/8" = 1'-0"  
EXISTING CHIMNEY NOT SHOWN FOR CLARITY

**NOTES:**

1. SEE SHEET S19 AND S20 FOR TEMPORARY COLUMN AND HEADER DETAILS.

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	BRG	11\17	Checked RBM 11\17
Drawn	ERB	11\17	In Charge of RAL 11\17

**HNTB**

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MAINE  
TURNPIKE

MTA PROJECT MANAGER: BRIAN TADDEO, PE

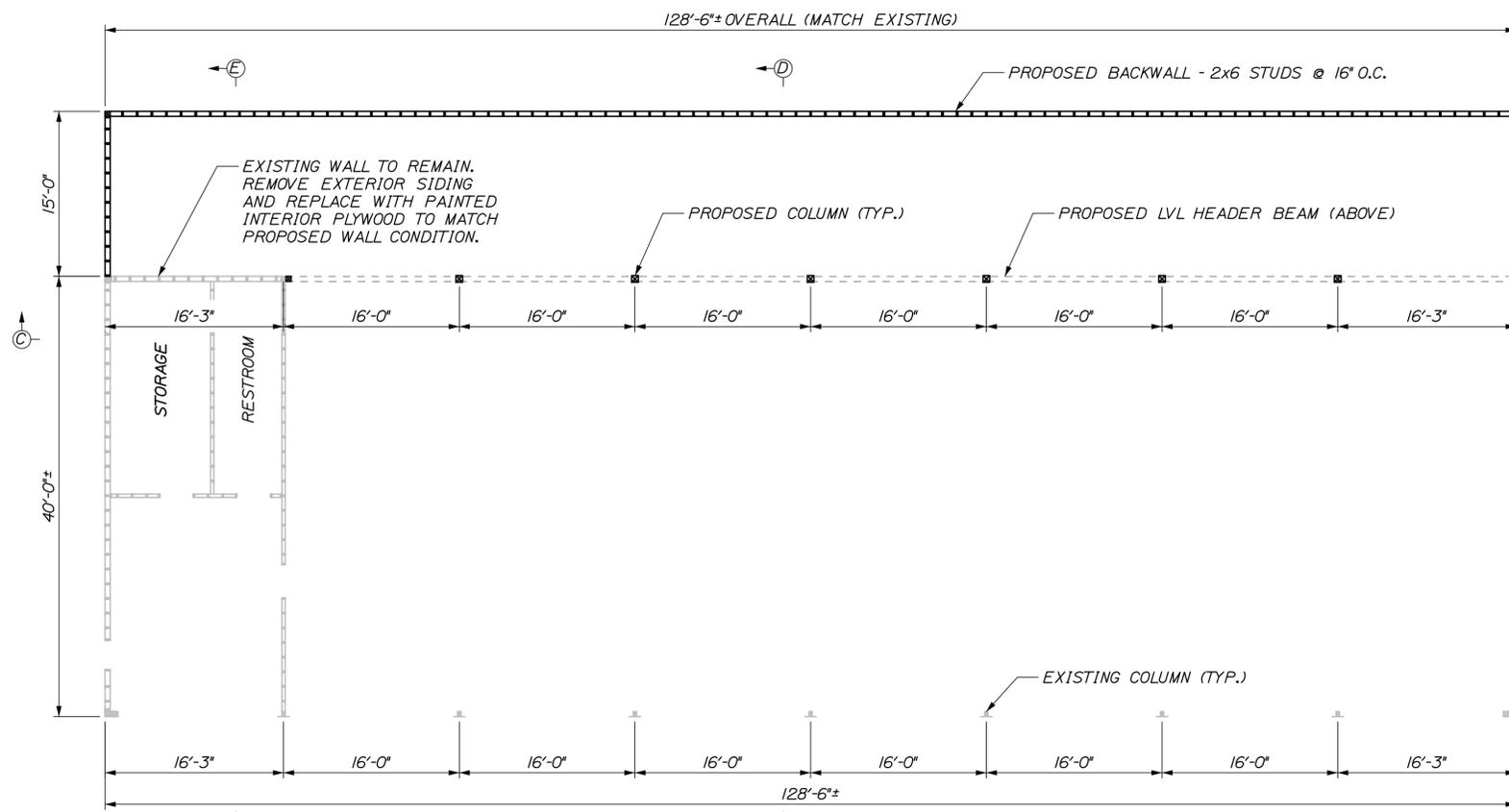
MAINTENANCE GARAGE EXTENSIONS  
TEMPORARY SUPPORT DETAILS  
(KENNEBUNK #1)

SHEET NUMBER: S13  
CONTRACT: 2018.23  
14 OF 58

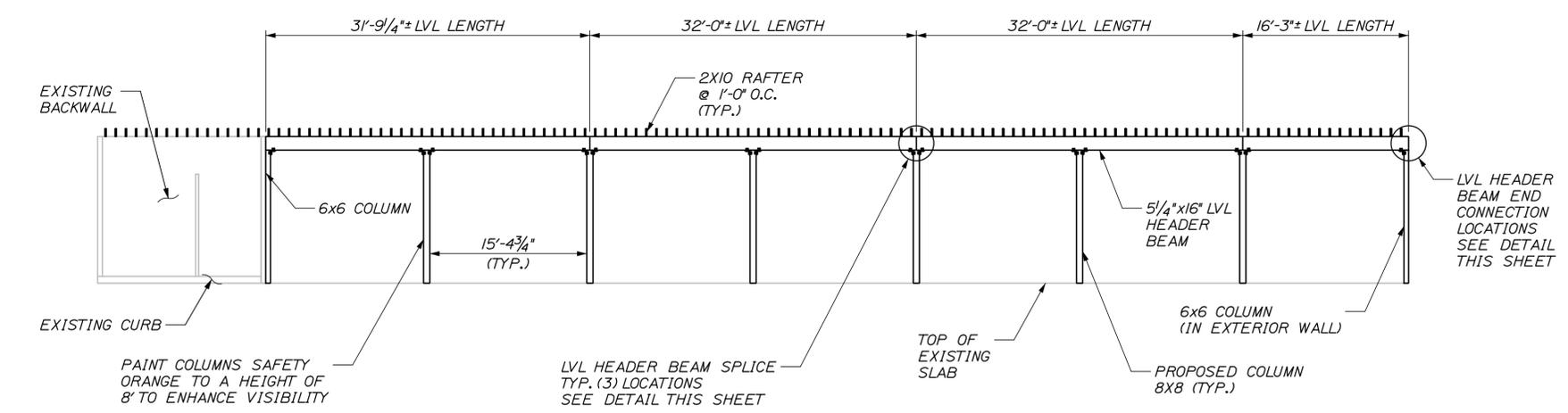
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Date: 11/12/2018

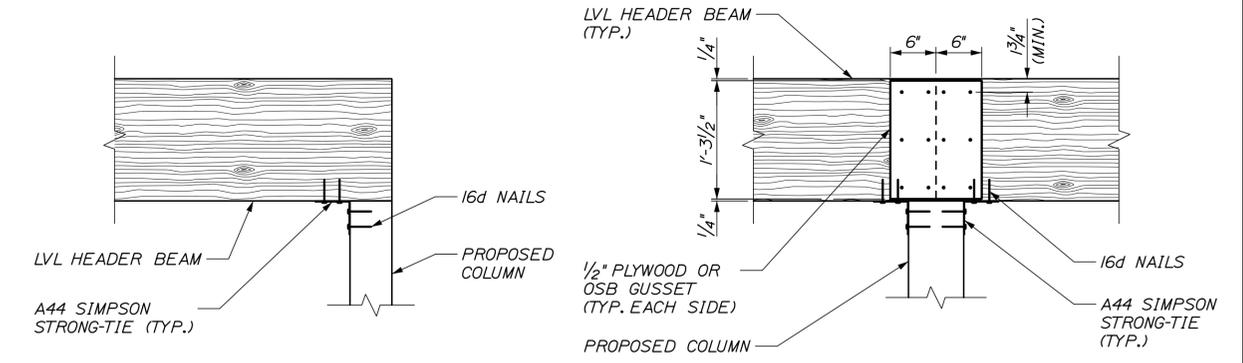
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**PROPOSED FRAMING PLAN VIEW**  
SCALE: 1/8" = 1'-0"

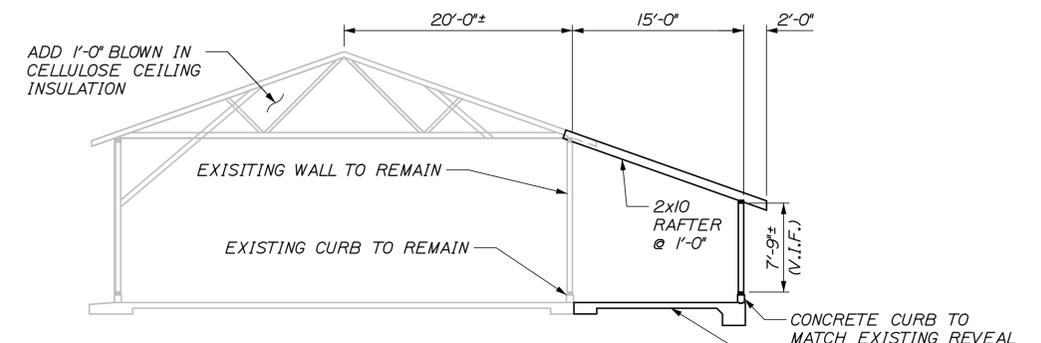


**SECTION C-C**  
SCALE: 1/8" = 1'-0"  
TOP CHORD OF TRUSS NOT SHOWN FOR CLARITY

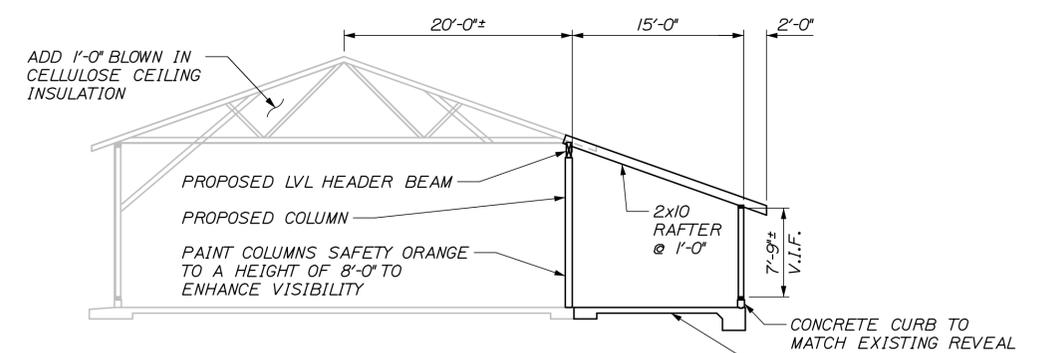


**LVL HEADER BEAM END CONNECTION**  
SCALE: 1" = 1'-0"

**LVL HEADER BEAM SPLICE**  
SCALE: 1" = 1'-0"



**SECTION E-E**  
SCALE: 1/8" = 1'-0"  
SHEATHING NOT SHOWN FOR CLARITY



**SECTION D-D**  
SCALE: 1/8" = 1'-0"  
SHEATHING NOT SHOWN FOR CLARITY

- NOTES:**
- SEE SHEET S21, S22, AND S23 FOR PROPOSED SLAB-ON-GRADE DETAILS.
  - SEE SHEET S24 FOR PROPOSED COLUMN AND HEADER DETAILS.

Scale:		Designed by:	
No.	Revision	By	Date

<b>HNTB</b>			
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	By	Date	Checked
	BRG	11\17	RBM
Drawn	By	Date	In Charge of
	ERB	11\17	RAL

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

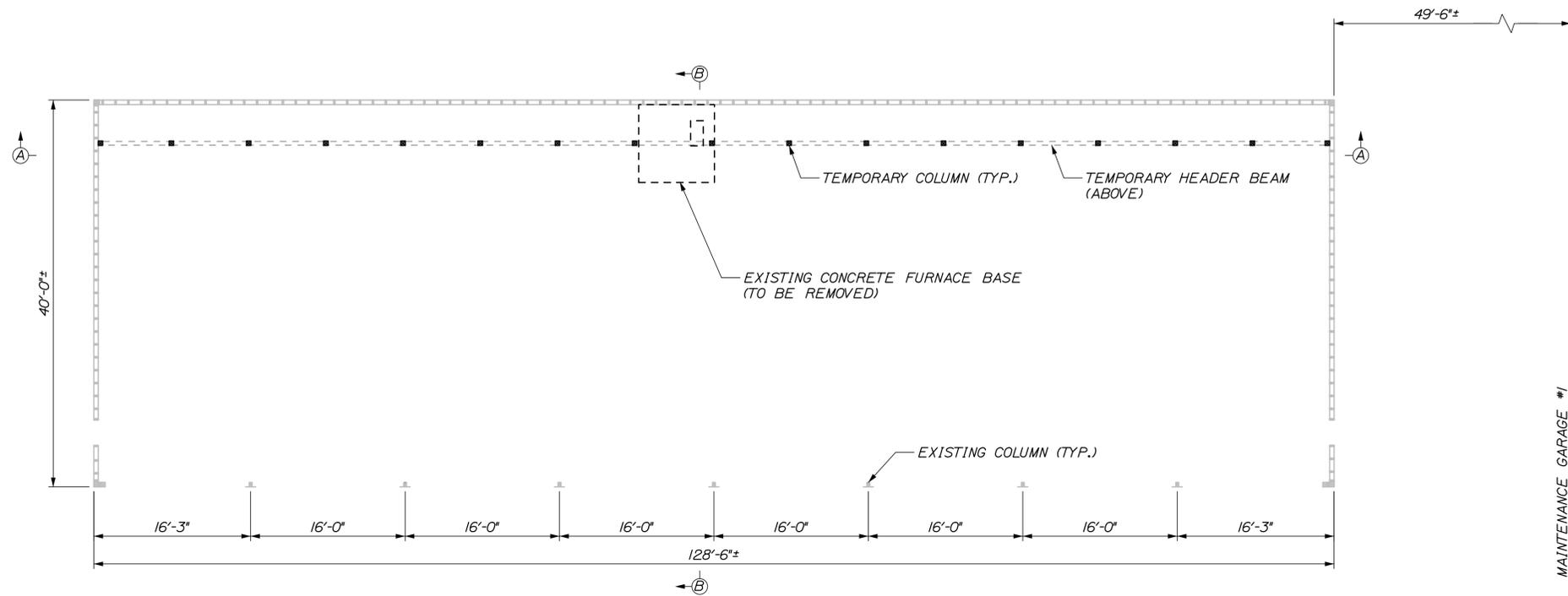
PROPOSED MODIFICATION DETAILS  
(KENNEBUNK #1)

SHEET NUMBER: S14

CONTRACT: 2018.23

15 OF 58

Date: 11/12/2018

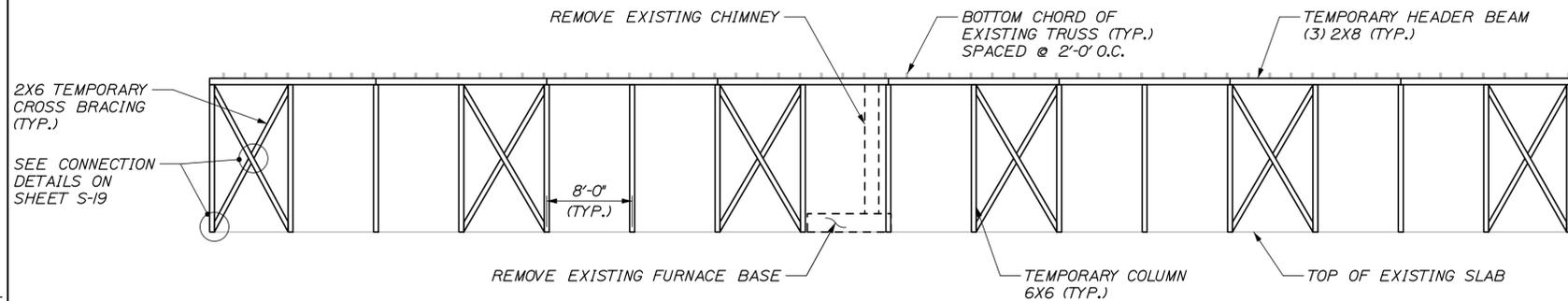


EXISTING FRAMING PLAN AND TEMPORARY SUPPORT PLAN VIEW  
SCALE: 1/8" = 1'-0"

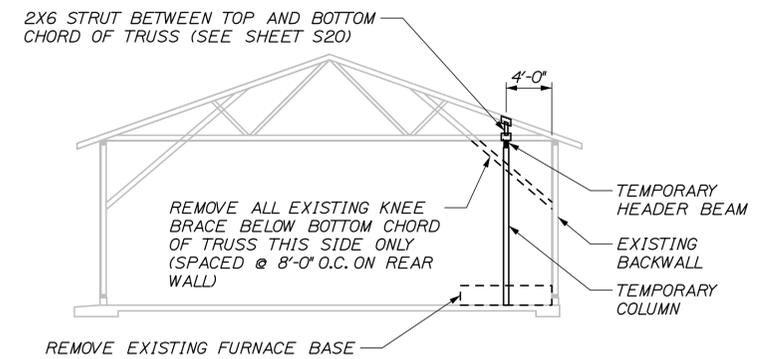
**GENERAL PROCEDURE**

1. REMOVE SHEATHING ON WALLS AND BELOW TRUSS TO ALLOW ACCESS TO STRUCTURAL COMPONENTS.
2. REMOVE EXISTING CHIMNEY, CONCRETE FURNACE BASE, FURNACE, AND DUCT WORK.
3. LOCATE EXISTING STUDS IN BACK WALL AND INSTALL TEMPORARY COLUMNS OFFSET TO STUDS ACCORDING TO THE DETAILS ON THE STRUCTURAL PLANS. REMOVE EXISTING KNEE BRACE TO THE BOTTOM OF THE TRUSS AT LOCATIONS SHOWN ON THE STRUCTURAL PLANS. CEILING SHEATHING SHALL BE PATCHED AT REMOVED KNEE BRACE LOCATIONS.
4. INSTALL TEMPORARY HEADER BEAM TIGHTLY BENEATH EXISTING TRUSSES. INSTALL TEMPORARY STRUTS BETWEEN BOTTOM AND TOP CHORDS OF THE EXISTING TRUSS AS SHOWN ON THE STRUCTURAL PLANS. ALL MODIFICATION WORK COMPLETED WHILE THE TEMPORARY SUPPORT IS IN PLACE SHALL BE COMPLETED WITH ONLY STRUCTURAL DEAD LOAD ON THE ROOF. DO NOT PERFORM THIS WORK WHEN THE ROOF IS SUBJECT TO SNOW OR LIVE LOAD CONDITIONS.
5. REMOVE EXISTING BACKWALL, CURB AND PORTION OF THE ROOF AS SHOWN IN THE STRUCTURAL PLANS TO CONSTRUCT PROPOSED EXTENSION. PORTIONS OF THE BACK WALL, CURB, AND ROOF THAT ARE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
6. LAYOUT AND PLACE NEW CONCRETE SLAB-ON-GRADE AND CURB TO MATCH EXISTING FLOOR. SLOPE NEW FLOOR TO MATCH EXISTING DRAINAGE.
7. INSTALL NEW COLUMNS AND HEADER BEAMS ACCORDING TO THE DETAILS IN THE STRUCTURAL PLANS. PAINT NEW COLUMNS SAFETY ORANGE TO A HEIGHT OF 8' TO ENHANCE VISIBILITY.
8. CONSTRUCT NEW BACKWALL AND ROOF. TIE INTO AND MATCH EXISTING WALL CONSTRUCTION AND ROOF PITCH.
9. REMOVE TEMPORARY SUPPORT.
10. REMOVE ALL EXISTING SHINGLES, INSPECT ROOF SHEATHING, REPLACE ANY ROTTED SHEATHING OR DAMAGED WATERPROOFING. INSTALL NEW PREFORMED METAL ROOFING ON EXISTING AND NEW ROOF. NEW UNDERLAYMENT SHALL BE INSTALLED AT ALL LOCATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
11. REMOVE ALL EXISTING SIDING, INSPECT WALL SHEATHING, REPLACE ANY ROTTED SHEATHING. REPLACEMENT OF ROTTED SHEATHING SHALL BE PAID PER SHEATHING PAY ITEM. INSTALL NEW PREFORMED METAL SIDING ON EXISTING AND NEW WALLS.
12. INSTALL ELECTRICAL CONDUITS AND LED LIGHTS AT LOCATIONS AS DESCRIBED IN THE ELECTRICAL SPECIFICATIONS.
13. INSTALL NEW FURNACE UNITS AND DUCT WORK AS SHOWN ON THE MECHANICAL PLANS AND INSTALL DIRECT VENT OUT THE PROPOSED BACKWALL.

MAINTENANCE GARAGE #1



SECTION A-A  
SCALE: 1/8" = 1'-0"



SECTION B-B  
SCALE: 1/8" = 1'-0"  
EXISTING CHIMNEY NOT SHOWN FOR CLARITY

**NOTES:**

1. SEE SHEET S19 AND S20 FOR TEMPORARY COLUMN AND HEADER DETAILS.

Scale:				Designed by:					
No.	Revision	By	Date	<p style="text-align: center;"><b>HNTB</b></p> <p>HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909</p> <p style="text-align: center;">MAINE TURNPIKE</p> <p style="text-align: center;"><b>THE GOLD STAR MEMORIAL HIGHWAY</b></p>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE				By	Date	By	Date		
				Designed	BRG	11\17	Checked	RBM	11\17
				Drawn	ERB	11\17	In Charge of	RAL	11\17

Scale:				Designed by:					
No.	Revision	By	Date	<p style="text-align: center;"><b>HNTB</b></p> <p>HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909</p> <p style="text-align: center;">MAINE TURNPIKE</p> <p style="text-align: center;"><b>THE GOLD STAR MEMORIAL HIGHWAY</b></p>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE				By	Date	By	Date		
				Designed	BRG	11\17	Checked	RBM	11\17
				Drawn	ERB	11\17	In Charge of	RAL	11\17

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MAINE  
TURNPIKE

**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

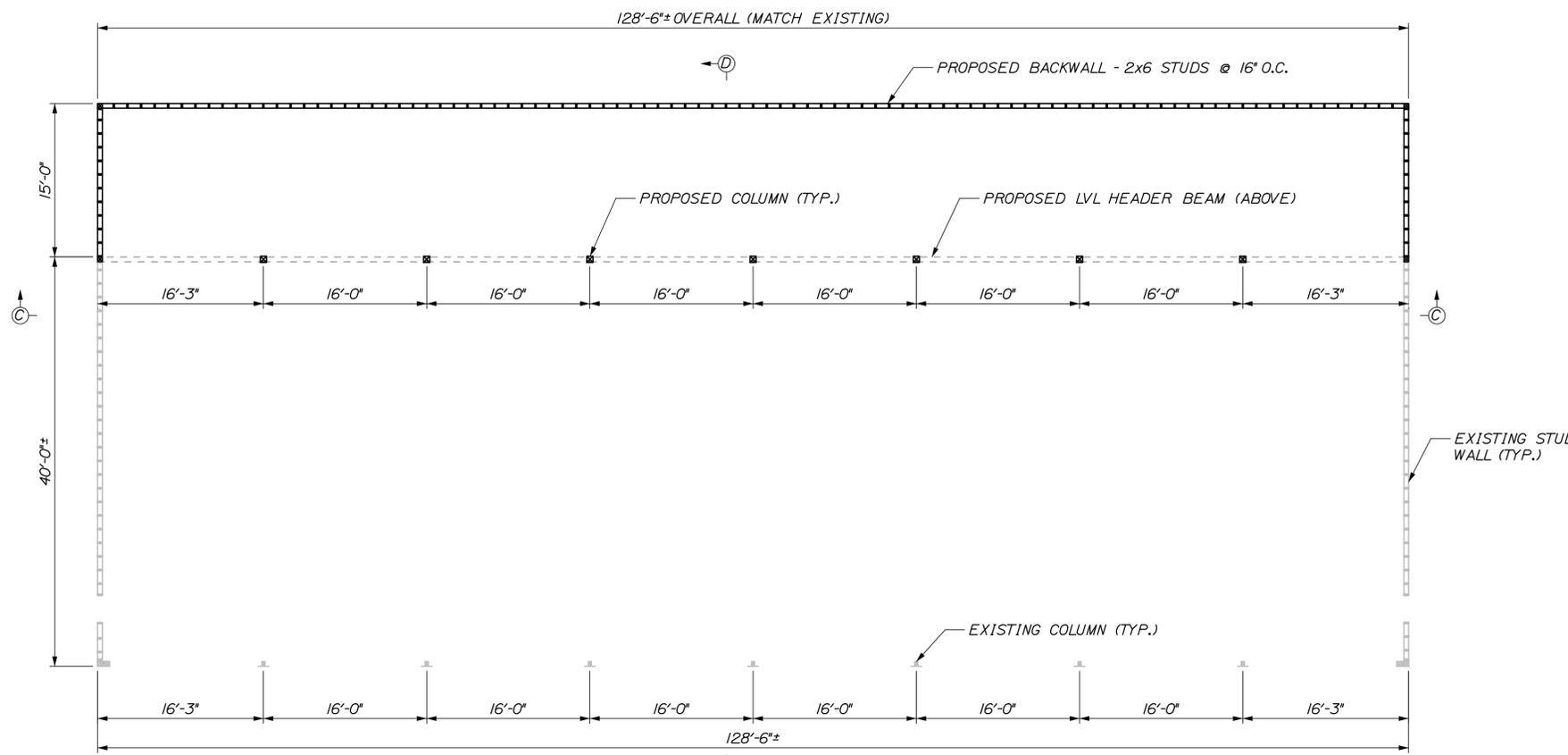
MAINTENANCE GARAGE EXTENSIONS  
TEMPORARY SUPPORT DETAILS  
(KENNEBUNK #2)

SHEET NUMBER: S15  
CONTRACT: 2018.23  
16 OF 58

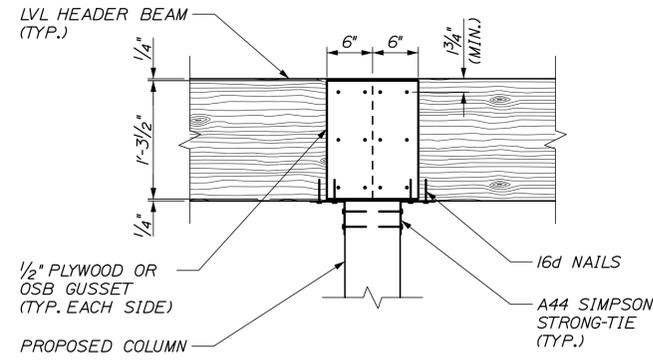
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Date: 11/12/2018

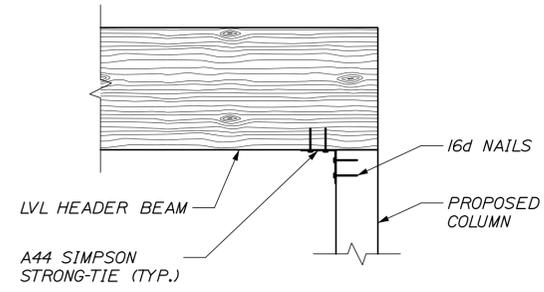
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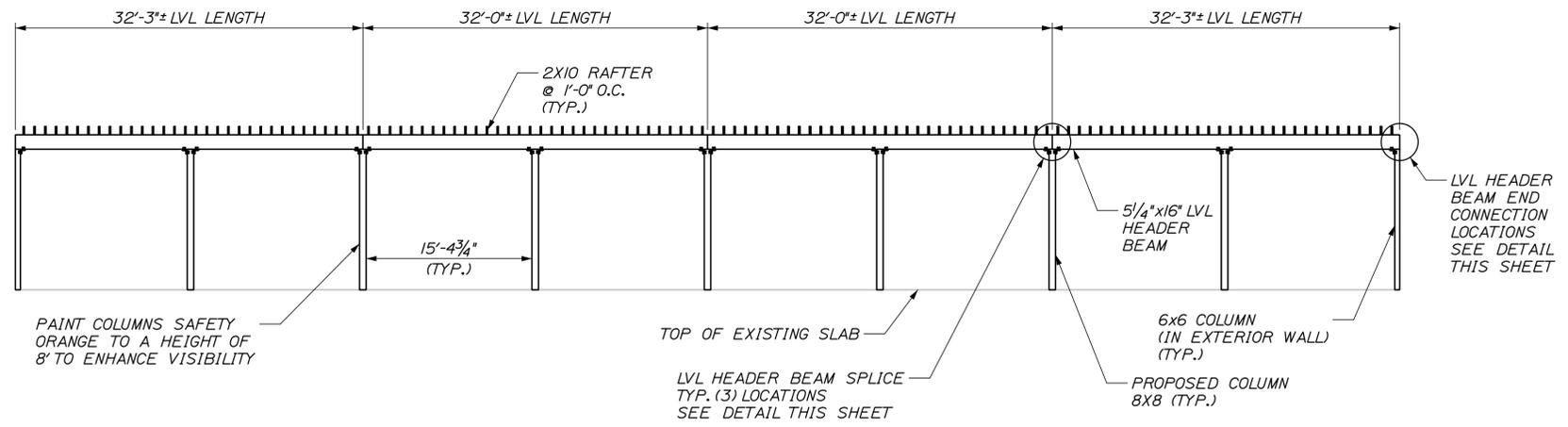
**PROPOSED FRAMING PLAN VIEW**  
SCALE: 1/8" = 1'-0"



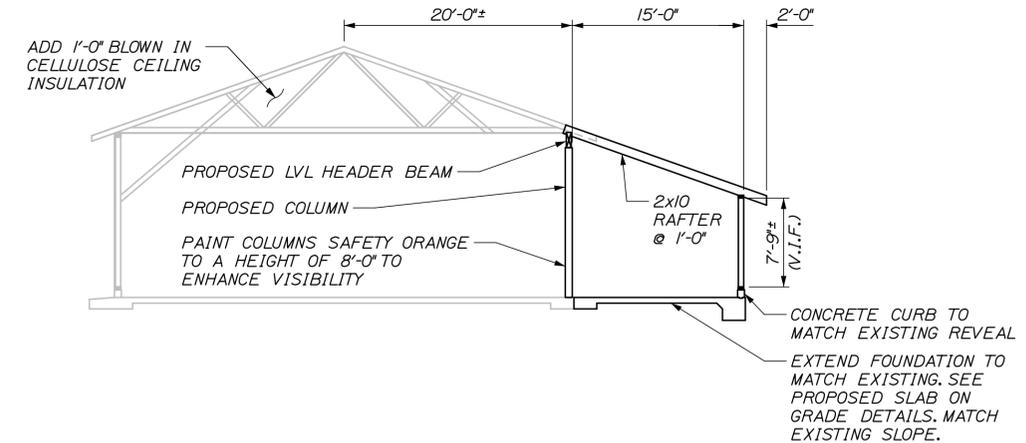
**LVL HEADER BEAM SPLICE**  
SCALE: 1" = 1'-0"



**LVL HEADER BEAM END CONNECTION**  
SCALE: 1" = 1'-0"



**SECTION C-C**  
SCALE: 1/8" = 1'-0"  
TOP CHORD OF TRUSS NOT SHOWN FOR CLARITY



**SECTION D-D**  
SCALE: 1/8" = 1'-0"  
SHEATHING NOT SHOWN FOR CLARITY

- NOTES:**
- SEE SHEET S21, S22, AND S23 FOR PROPOSED SLAB-ON-GRADE DETAILS.
  - SEE SHEET S24 FOR PROPOSED COLUMN AND HEADER DETAILS.

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	BRG	11\17	Checked RBM 11\17
Drawn	ERB	11\17	In Charge of RAL 11\17

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**MAINE TURNPIKE**

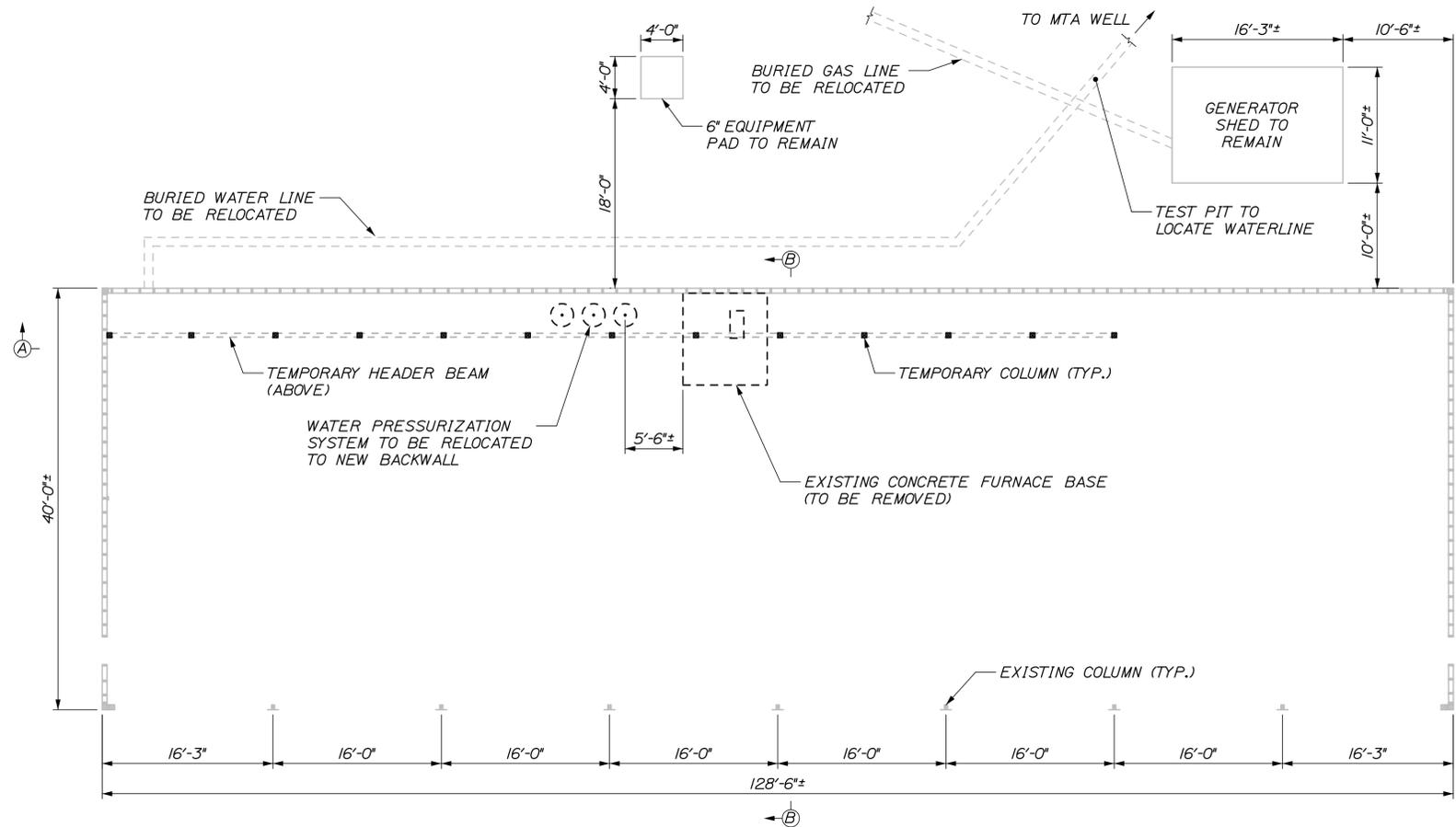
**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

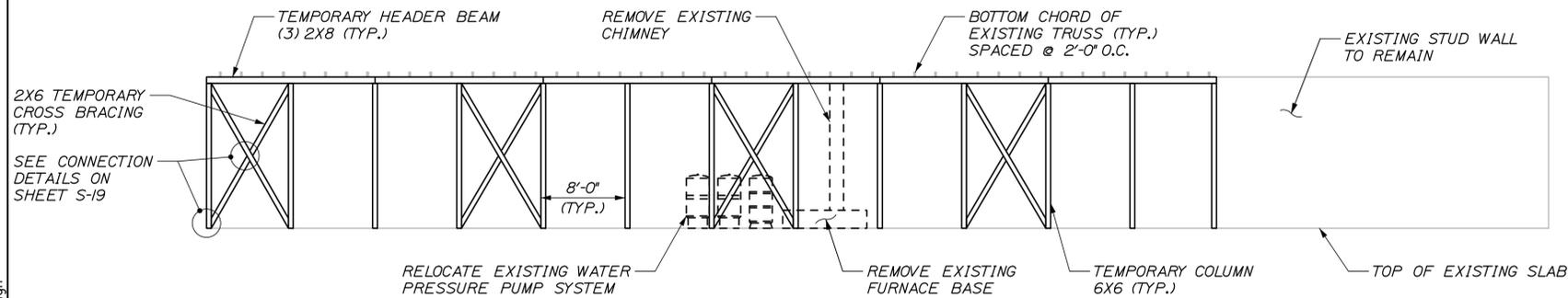
MAINTENANCE GARAGE EXTENSIONS  
PROPOSED MODIFICATION DETAILS  
(KENNEBUNK #2)

SHEET NUMBER: S16  
CONTRACT: 2018.23  
17 OF 58

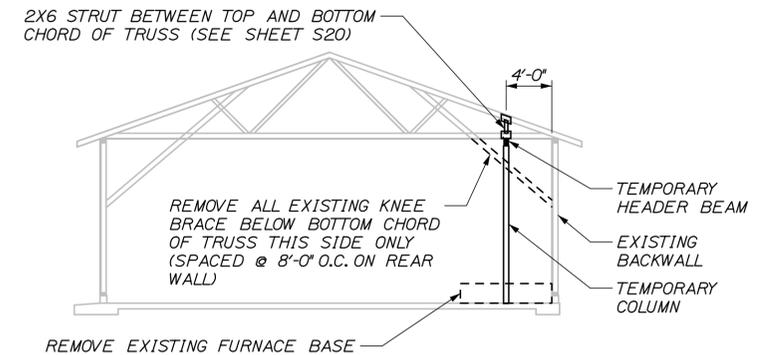
Date: 11/12/2018



EXISTING FRAMING PLAN AND TEMPORARY SUPPORT PLAN VIEW  
SCALE: 1/8" = 1'-0"



SECTION A-A  
SCALE: 1/8" = 1'-0"



SECTION B-B  
SCALE: 1/8" = 1'-0"  
EXISTING CHIMNEY NOT SHOWN FOR CLARITY

**GENERAL PROCEDURE**

1. REMOVE SHEATHING ON WALLS AND BELOW TRUSS TO ALLOW ACCESS TO STRUCTURAL COMPONENTS.
2. UNINSTALL WATER PRESSURIZATION SYSTEM AND STORE UNTIL REINSTALLATION.
3. REMOVE EXISTING CHIMNEY, CONCRETE FURNACE BASE, FURNACE, AND DUCT WORK.
4. LOCATE EXISTING STUDS IN BACK WALL AND INSTALL TEMPORARY COLUMNS OFFSET TO STUDS ACCORDING TO THE DETAILS ON THE STRUCTURAL PLANS. REMOVE EXISTING KNEE BRACE TO THE BOTTOM OF THE TRUSS AT LOCATIONS SHOWN ON THE STRUCTURAL PLANS. CEILING SHEATHING SHALL BE PATCHED AT REMOVED KNEE BRACE LOCATIONS.
5. INSTALL TEMPORARY HEADER BEAM TIGHTLY BENEATH EXISTING TRUSSES. INSTALL TEMPORARY STRUTS BETWEEN BOTTOM AND TOP CHORDS OF THE EXISTING TRUSS AS SHOWN ON THE STRUCTURAL PLANS. ALL MODIFICATION WORK COMPLETED WHILE THE TEMPORARY SUPPORT IS IN PLACE SHALL BE COMPLETED WITH ONLY STRUCTURAL DEAD LOAD ON THE ROOF. DO NOT PERFORM THIS WORK WHEN THE ROOF IS SUBJECT TO SNOW OR LIVE LOAD CONDITIONS.
6. REMOVE EXISTING BACKWALL, CURB AND PORTION OF THE ROOF AS SHOWN IN THE STRUCTURAL PLANS TO CONSTRUCT PROPOSED EXTENSION. PORTIONS OF THE BACK WALL, CURB, AND ROOF THAT ARE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
7. LAYOUT AND PLACE NEW CONCRETE SLAB-ON-GRADE AND CURB TO MATCH EXISTING FLOOR. SLOPE NEW FLOOR TO MATCH EXISTING DRAINAGE.
8. INSTALL NEW COLUMNS AND HEADER BEAMS ACCORDING TO THE DETAILS IN THE STRUCTURAL PLANS. PAINT NEW COLUMNS SAFETY ORANGE TO A HEIGHT OF 8' TO ENHANCE VISIBILITY.
9. CONSTRUCT NEW BACKWALL AND ROOF. TIE INTO AND MATCH EXISTING WALL CONSTRUCTION AND ROOF PITCH.
10. REMOVE TEMPORARY SUPPORT.
11. REINSTALL WATER PRESSURIZATION SYSTEM ON PROPOSED BACKWALL.
12. REMOVE ALL EXISTING SHINGLES, INSPECT ROOF SHEATHING, REPLACE ANY ROTTED SHEATHING OR DAMAGED WATERPROOFING. INSTALL NEW PREFORMED METAL ROOFING ON EXISTING AND NEW ROOF. NEW UNDERLAYMENT SHALL BE INSTALLED AT ALL LOCATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
13. REMOVE ALL EXISTING SIDING, INSPECT WALL SHEATHING, REPLACE ANY ROTTED SHEATHING. REPLACEMENT OF ROTTED SHEATHING SHALL BE PAID PER SHEATHING PAY ITEM. INSTALL NEW PREFORMED METAL SIDING ON EXISTING AND NEW WALLS.
14. INSTALL ELECTRICAL CONDUITS AND LED LIGHTS AT LOCATIONS AS DESCRIBED IN THE ELECTRICAL SPECIFICATIONS.
15. INSTALL NEW FURNACE UNITS AND DUCT WORK AS SHOWN ON THE MECHANICAL PLANS AND INSTALL DIRECT VENT OUT THE PROPOSED BACKWALL.

**NOTES:**

1. SEE SHEET S19 AND S20 FOR TEMPORARY COLUMN AND HEADER DETAILS.

Scale:				Designed by:			
No.	Revision	By	Date	 HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909			

CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE						
	By	Date		By	Date	
	BRG	11\17	Checked	RBM	11\17	
	Drawn	ERB	11\17	In Charge of	RAL	11\17

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

**MAINTENANCE GARAGE EXTENSIONS**

**TEMPORARY SUPPORT DETAILS  
(LITCHFIELD)**

SHEET NUMBER: S17

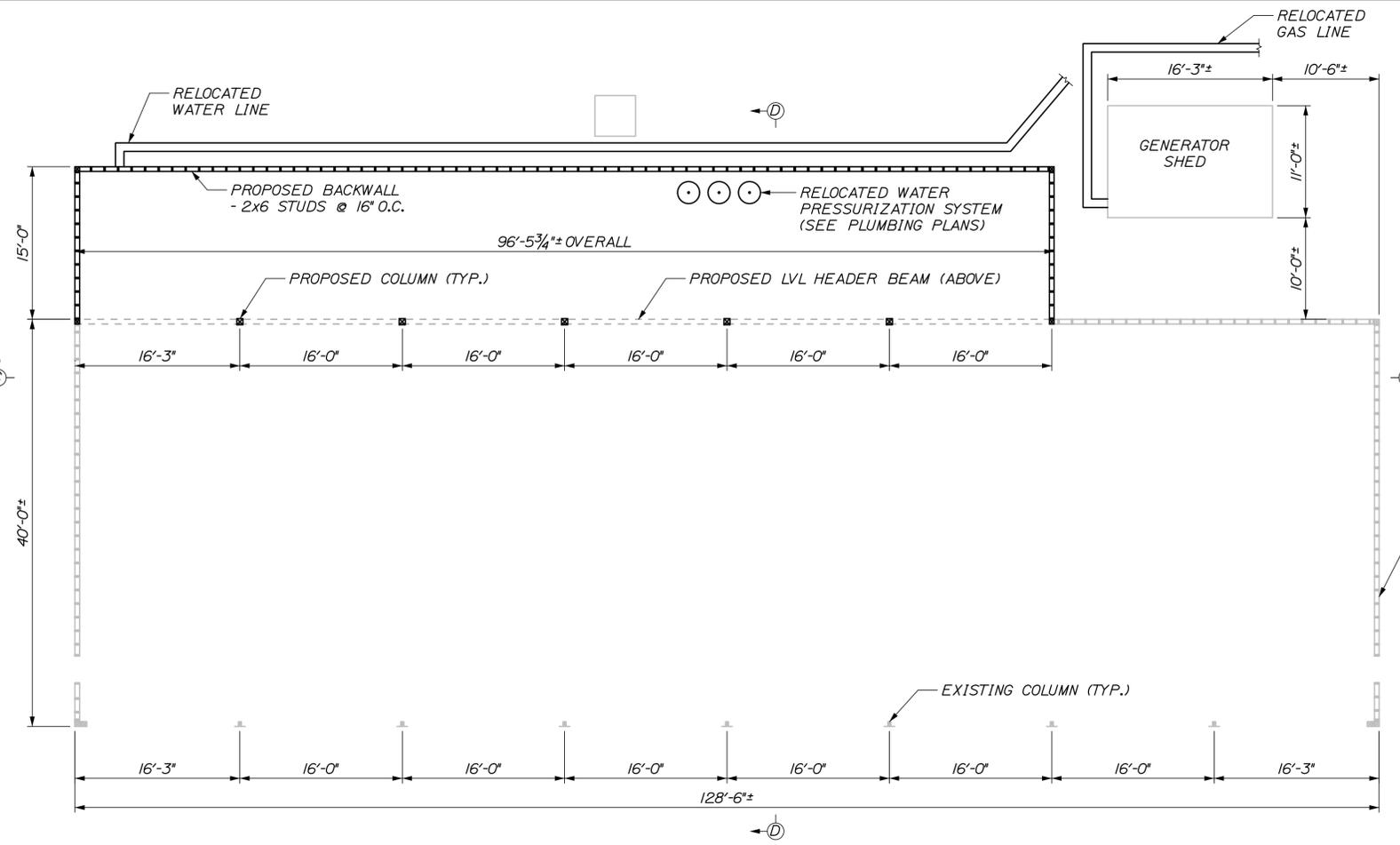
CONTRACT: 2018.23

18 OF 58

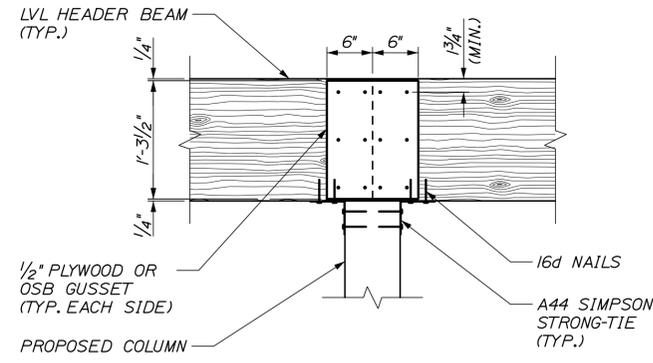
Filename: 018\_Temp\_Support\_Details\_Litchfield.dgn

Date: 11/12/2018

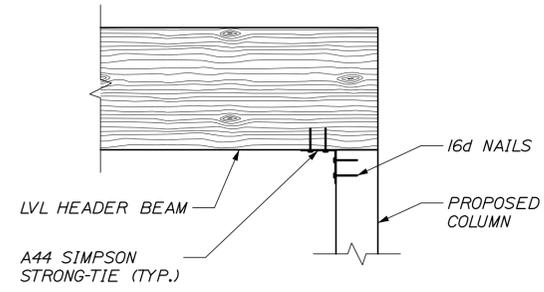
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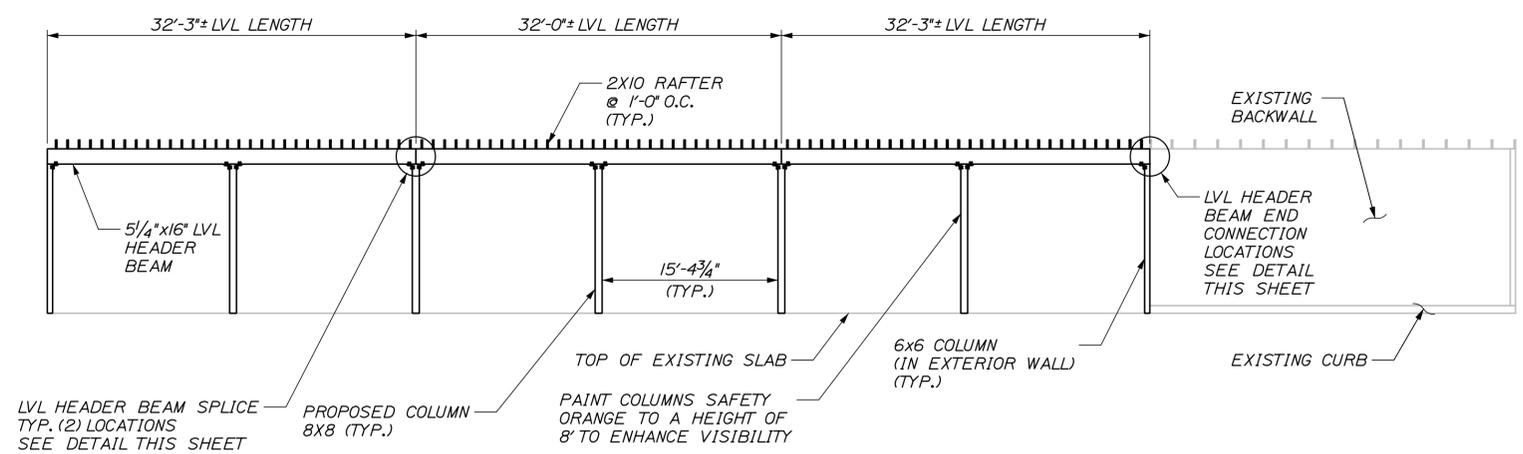
**PROPOSED FRAMING PLAN VIEW**  
SCALE: 1/8" = 1'-0"



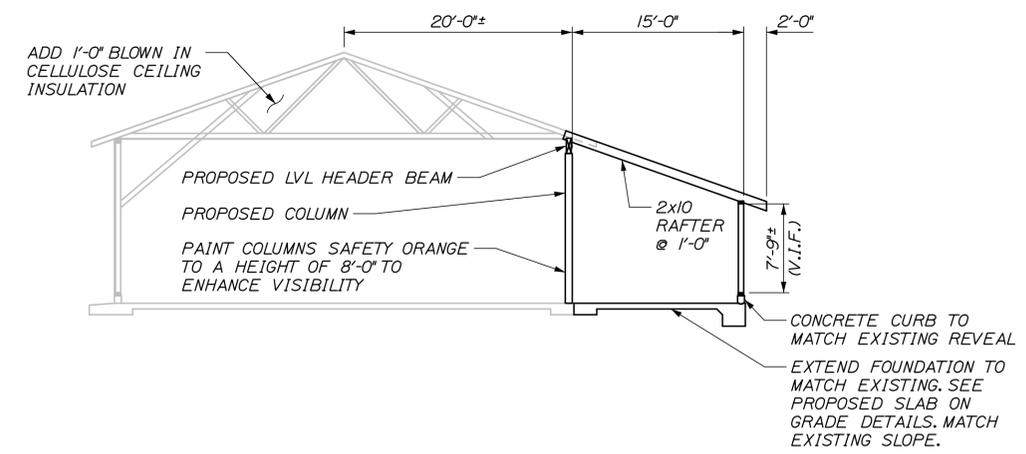
**LVL HEADER BEAM SPLICE**  
SCALE: 1" = 1'-0"



**LVL HEADER BEAM END CONNECTION**  
SCALE: 1" = 1'-0"



**SECTION C-C**  
SCALE: 1/8" = 1'-0"  
TOP CHORD OF TRUSS NOT SHOWN FOR CLARITY



**SECTION D-D**  
SCALE: 1/8" = 1'-0"  
SHEATHING NOT SHOWN FOR CLARITY

- NOTES:**
- SEE SHEET S21, S22, AND S23 FOR PROPOSED SLAB-ON-GRADE DETAILS.
  - SEE SHEET S24 FOR PROPOSED COLUMN AND HEADER DETAILS.

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<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

PROPOSED MODIFICATION DETAILS  
(LITCHFIELD)

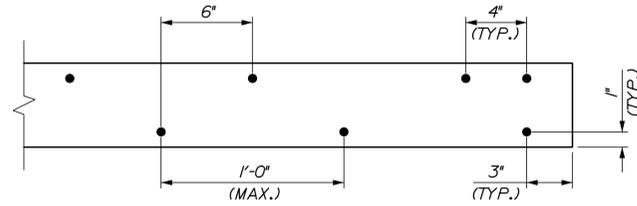
SHEET NUMBER: S18

CONTRACT: 2018.23

19 OF 58

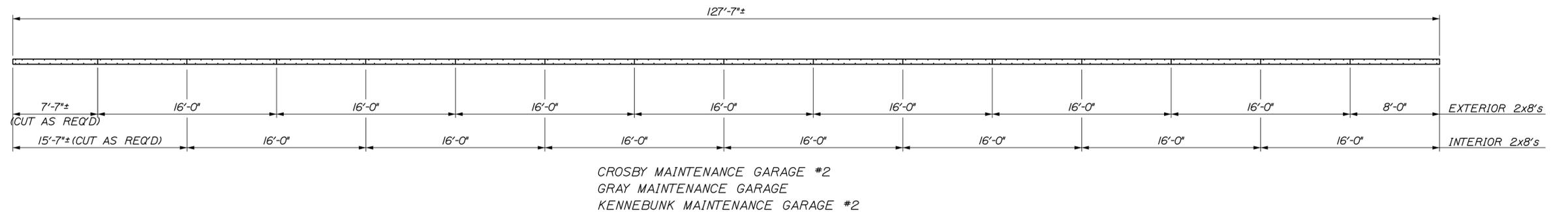
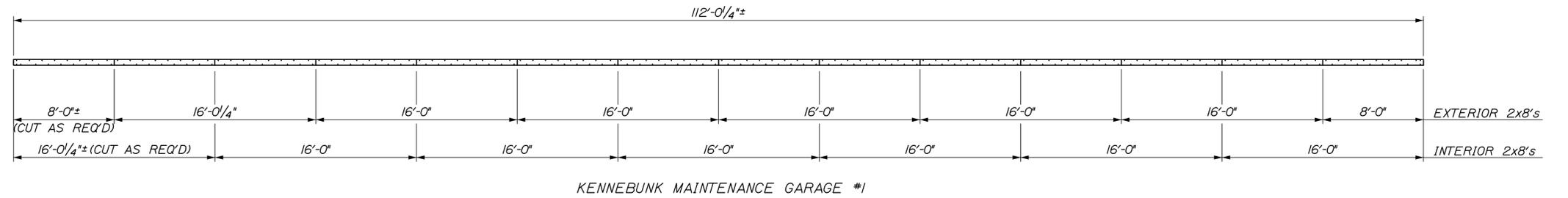
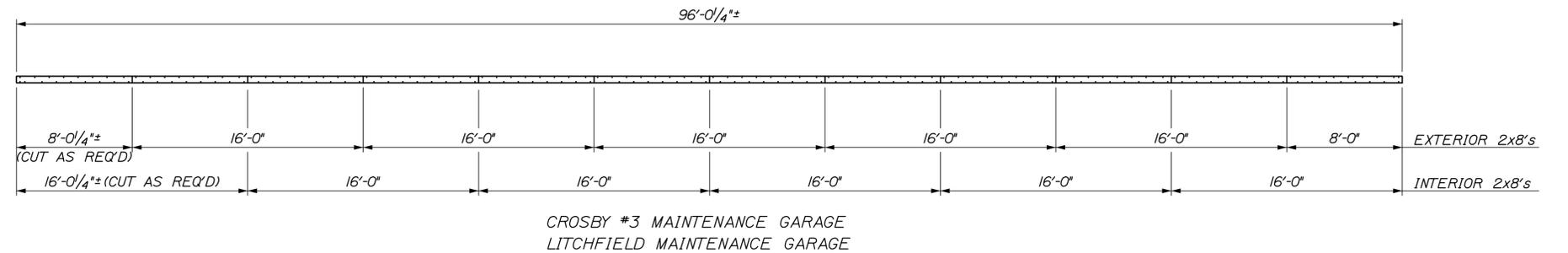
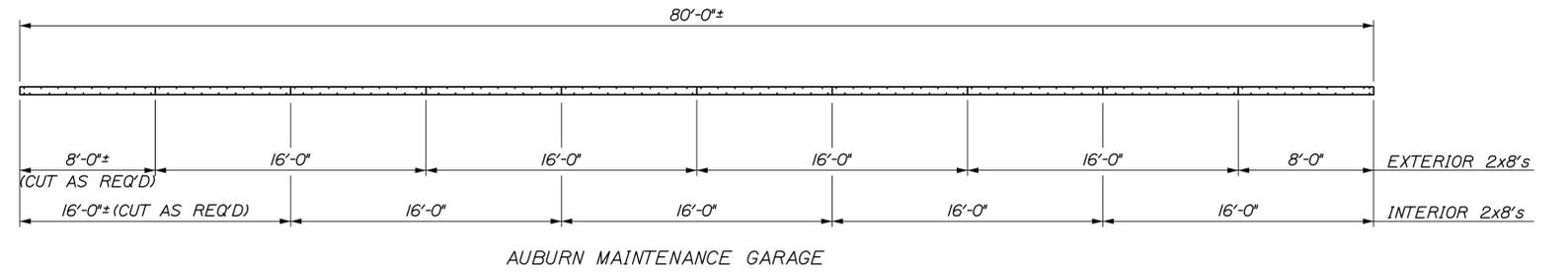
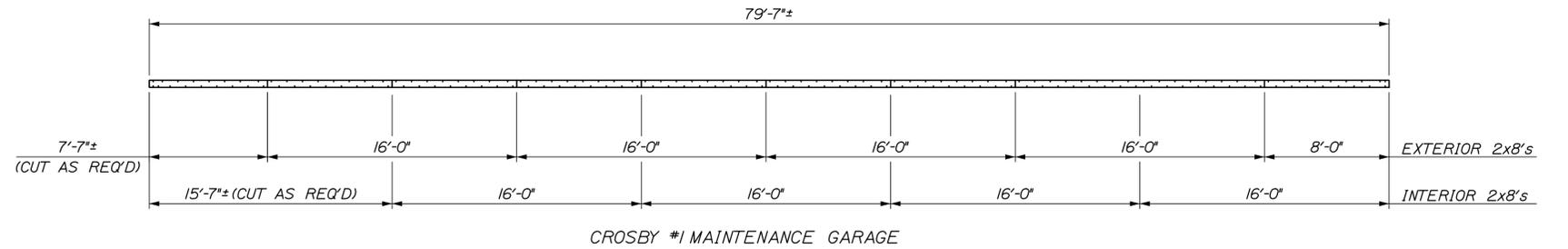
**TEMPORARY HEADER NOTES:**

1. COLUMNS NOT SHOWN FOR CLARITY
2. STAGGER SPACING AS SHOWN TOP TO BOTTOM & NEAR SIDE TO FAR SIDE
3. ALL NAILS SHOWN ARE 16d COMMON (BRIGHT OR GALV.)



**TYPICAL NAILING PATTERN**

SCALE: 2" = 1'-0"



Date: 11/12/2018

Filename: 020\_Temporary Header Details.dgn

Scale:			
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<b>HNTB</b>					
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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

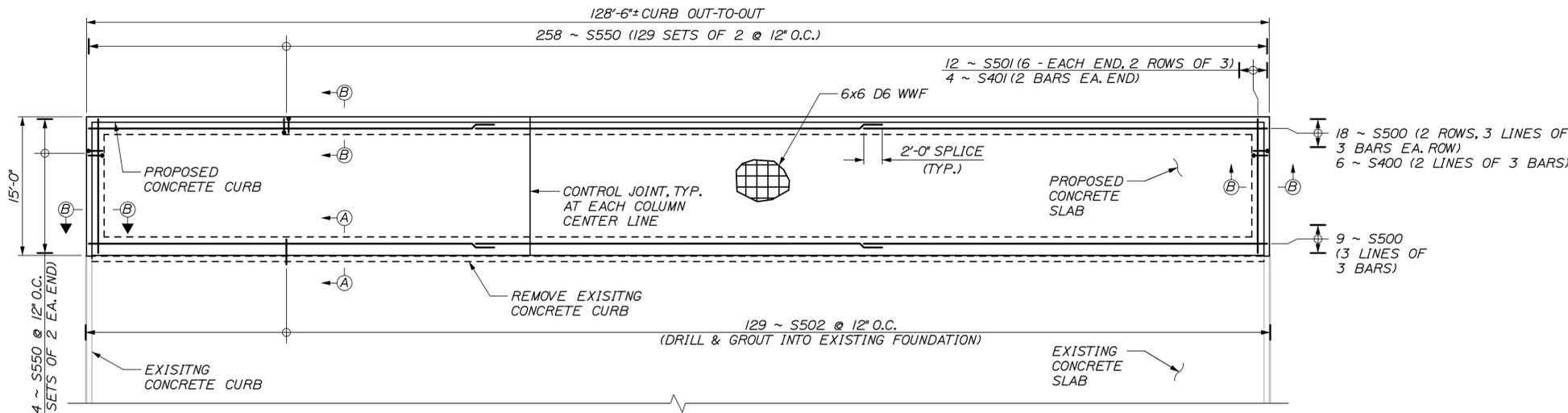
TEMPORARY COLUMN & HEADER DETAILS I

SHEET NUMBER: S19

CONTRACT: 2018.23 20 OF 58



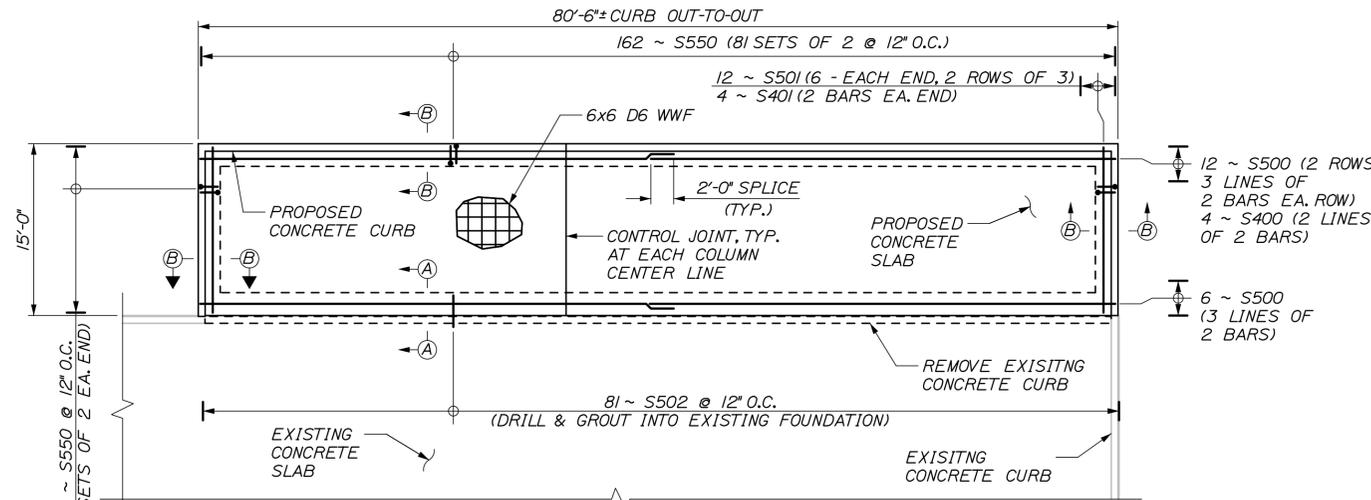
Date: 11/12/2018



SLAB ON GRADE PLAN VIEW - KENNEBUNK #1, KENNEBUNK #2, AND GRAY

SCALE: 1/8" = 1'-0"

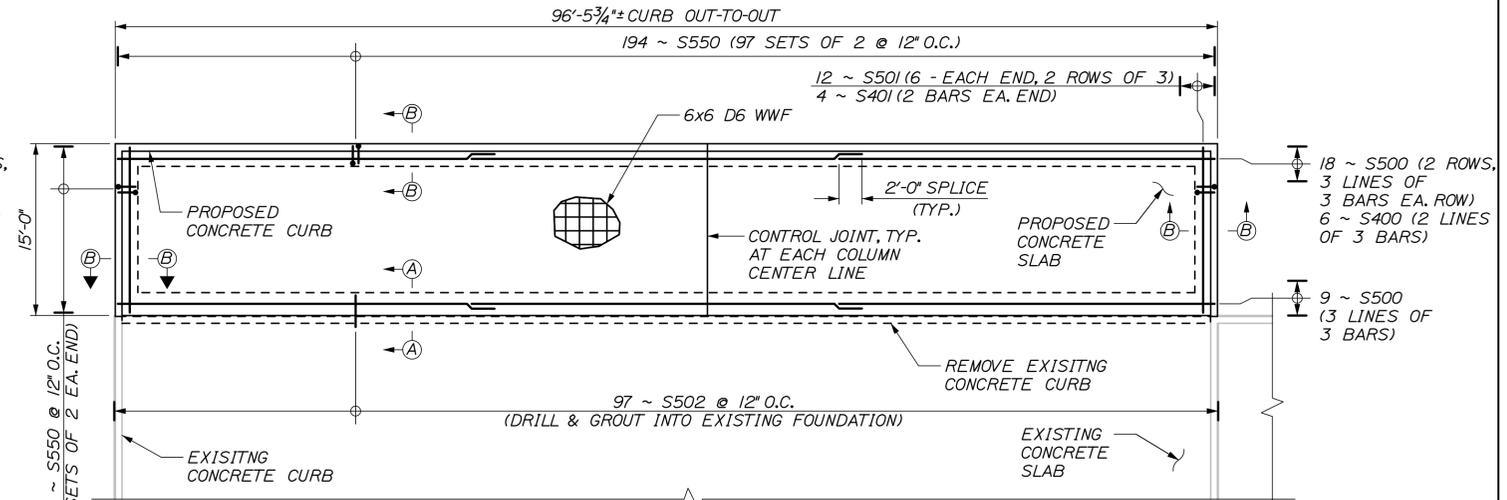
NOTE: SLOPE PROPOSED SLAB TO MATCH EXISTING SLAB SLOPE. EXISTING DRAINS TO BE USED TO DRAIN SLAB EXTENSION.



SLAB ON GRADE PLAN VIEW - AUBURN

SCALE: 1/8" = 1'-0"

NOTE: SLOPE PROPOSED SLAB TO MATCH EXISTING SLAB SLOPE. EXISTING DRAINS TO BE USED TO DRAIN SLAB EXTENSION.



SLAB ON GRADE PLAN VIEW - LITCHFIELD

SCALE: 1/8" = 1'-0"

NOTE: SLOPE PROPOSED SLAB TO MATCH EXISTING SLAB SLOPE. EXISTING DRAINS TO BE USED TO DRAIN SLAB EXTENSION.

AUBURN REINFORCING SCHEDULE

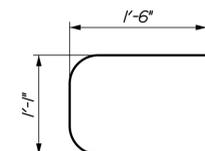
MARK	SIZE	No.	LENGTH	TYPE	LOCATION
S400	4	4	4'-1"	STR	CURB LONG
S401	4	4	14'-8"	STR	CURB SHORT
S500	5	18	4'-0"	STR	FOOTING LONG
S501	5	12	14'-6"	STR	FOOTING SHORT
S502	5	81	2'-9"	STR	FOOTING DOWEL
S550	5	226	4'-1"	U-BAR	FOOTING STIRRUP

KENNEBUNK #1 & #2, GRAY REINFORCING SCHEDULE

MARK	SIZE	No.	LENGTH	TYPE	LOCATION
S400	4	6	44'-1"	STR	CURB LONG
S401	4	4	14'-8"	STR	CURB SHORT
S500	5	27	44'-0"	STR	FOOTING LONG
S501	5	12	14'-6"	STR	FOOTING SHORT
S502	5	129	2'-9"	STR	FOOTING DOWEL
S550	5	322	4'-1"	U-BAR	FOOTING STIRRUP

LITCHFIELD REINFORCING SCHEDULE

MARK	SIZE	No.	LENGTH	TYPE	LOCATION
S400	4	6	33'-4"	STR	CURB LONG
S401	4	4	14'-8"	STR	CURB SHORT
S500	5	27	33'-4"	STR	FOOTING LONG
S501	5	12	14'-6"	STR	FOOTING SHORT
S502	5	97	2'-9"	STR	FOOTING DOWEL
S550	5	258	4'-1"	U-BAR	FOOTING STIRRUP



S550 DETAIL SCALE: N.T.S.

SLAB-ON-GRADE NOTES:

- SLOPE PROPOSED SLAB TO MATCH EXISTING SLAB SLOPE. EXISTING DRAINS TO BE USED TO DRAIN SLAB EXTENSION.
- SAW CUT 1/2" DEEP CONTROL JOINTS IN PROPOSED SLAB-ON-GRADE. CONTROL JOINTS SHALL ALIGN WITH THE PROPOSED COLUMN CENTER LINES AND RUN PARALLEL TO THE SHORT (15') DIRECTION. SEAL CONTROL JOINTS WITH 3/8" DEEP SIKA IA.
- CONTRACTOR TO SUBMIT DOCUMENTATION OF WWF SUPPORT METHOD THAT MEETS THE REQUIREMENTS OF THE REINFORCEMENT SPECIFICATIONS.
- IF EXISTING FOUNDATION DRAINS ARE PRESENT THEY SHALL BE EXTENDED AROUND THE PROPOSED SLAB EXTENSION. THIS WORK SHALL BE INCIDENTAL TO THE LUMP SUM BUILDING ITEMS.
- SYNTHETIC FIBER REINFORCEMENT SHALL BE USED AT A DOSAGE RATE OF 3LB/CY.
- REINFORCING SCHEDULE QUANTITIES ARE PER BUILDING.
- FOR SECTIONS A-A AND B-B SEE SHEET S-23.

Filename: 022\_Proposed Slab on Grade Details.dgn

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE

By	Date	By	Date
Designed	BRG 11\17	Checked	RBM 11\17
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MAINE TURNPIKE

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

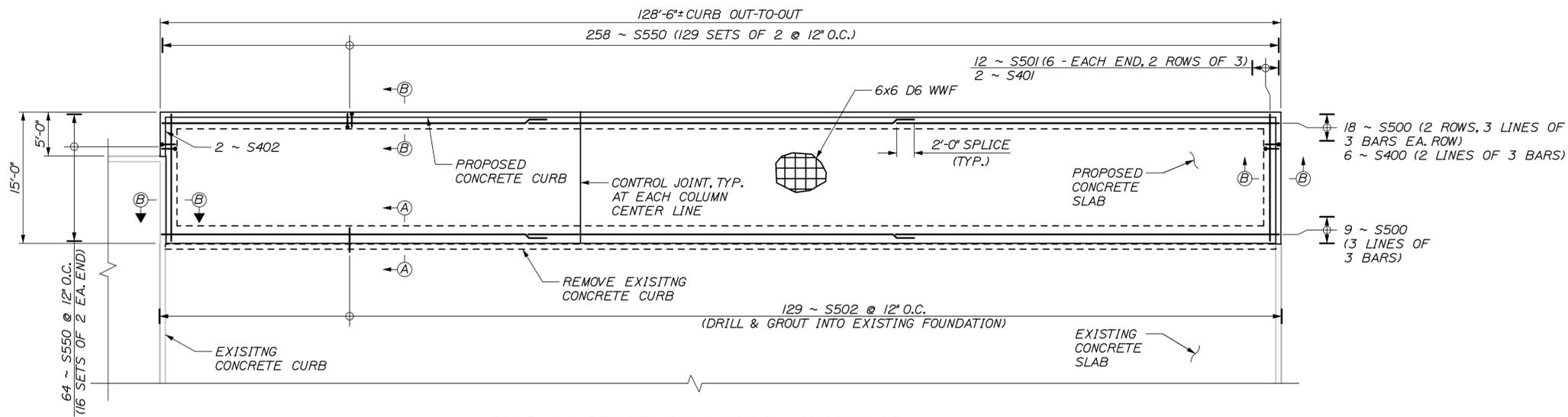
PROPOSED SLAB-ON-GRADE DETAILS I

SHEET NUMBER: S21

CONTRACT: 2018.23

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Date: 11/12/2018



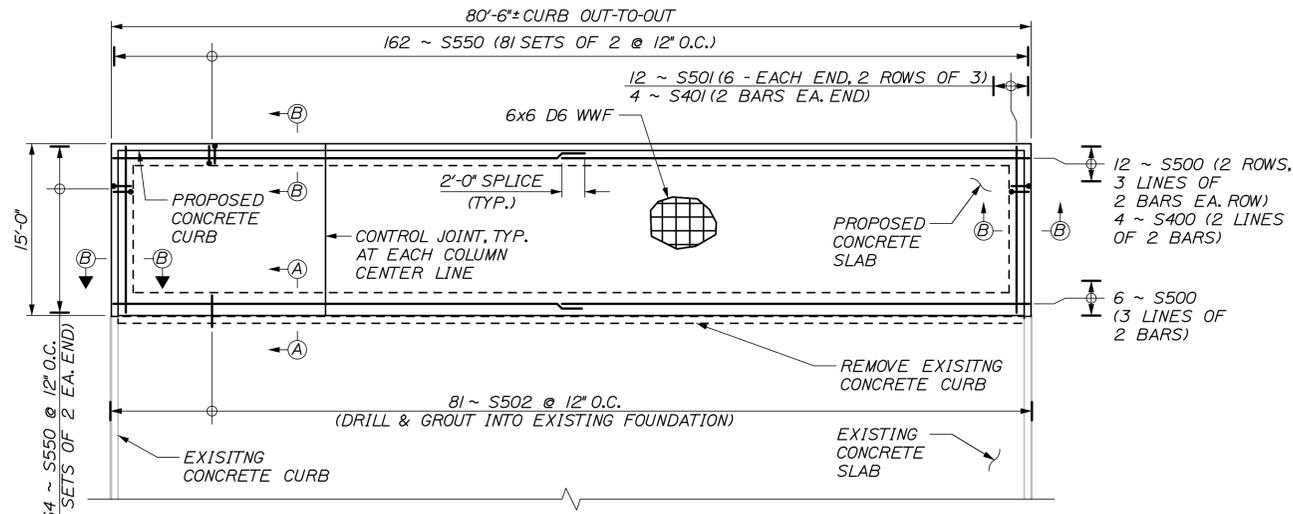
SLAB ON GRADE PLAN VIEW - CROSBY #2

SCALE: 1/8" = 1'-0"

NOTE: SLOPE PROPOSED SLAB TO MATCH EXISTING SLAB SLOPE. EXISTING DRAINS TO BE USED TO DRAIN SLAB EXTENSION.

**SLAB-ON-GRADE NOTES:**

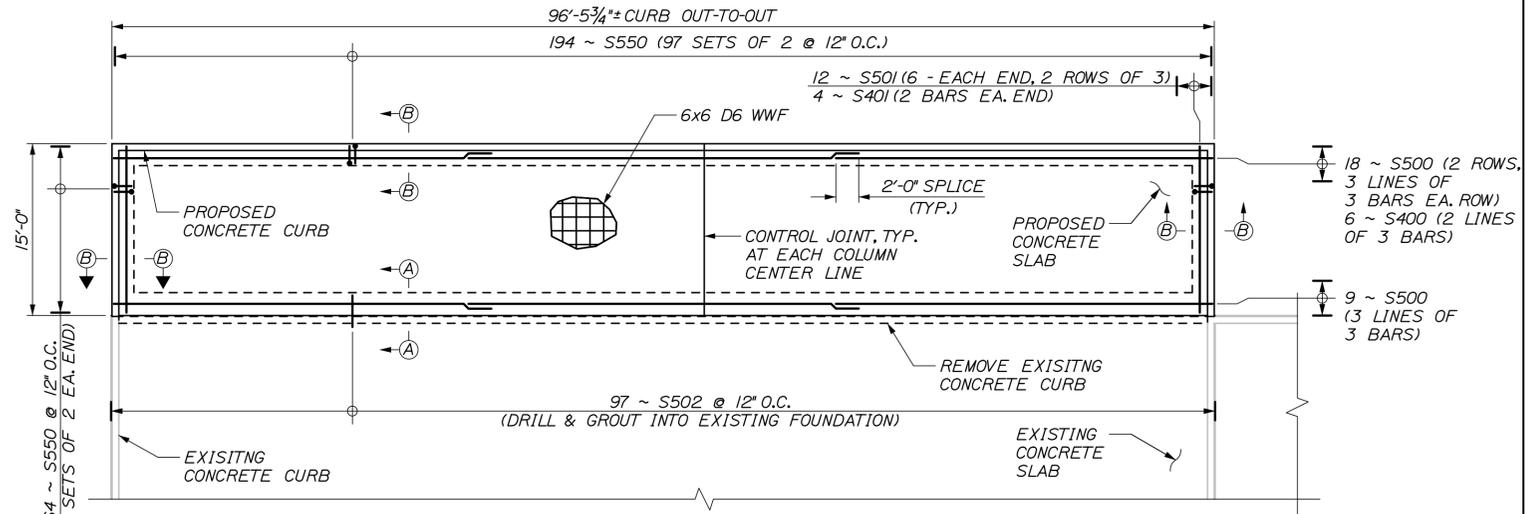
1. SEE "PROPOSED SLAB-ON-GRADE DETAILS 1" SHEET REINFORCING SCHEDULE AND SLAB-ON-GRADE NOTES.



SLAB ON GRADE PLAN VIEW - CROSBY #1

SCALE: 1/8" = 1'-0"

NOTE: SLOPE PROPOSED SLAB TO MATCH EXISTING SLAB SLOPE. EXISTING DRAINS TO BE USED TO DRAIN SLAB EXTENSION.



SLAB ON GRADE PLAN VIEW - CROSBY #3

SCALE: 1/8" = 1'-0"

NOTE: SLOPE PROPOSED SLAB TO MATCH EXISTING SLAB SLOPE. EXISTING DRAINS TO BE USED TO DRAIN SLAB EXTENSION.

**CROSBY #1  
REINFORCING SCHEDULE**

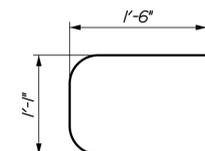
MARK	SIZE	No.	LENGTH	TYPE	LOCATION
S400	4	4	4'-1"	STR	CURB LONG
S401	4	4	14'-8"	STR	CURB SHORT
S500	5	18	4'-0"	STR	FOOTING LONG
S501	5	12	14'-6"	STR	FOOTING SHORT
S502	5	81	2'-9"	STR	FOOTING DOWEL
S550	5	226	4'-1"	U-BAR	FOOTING STIRRUP

**CROSBY #2  
REINFORCING SCHEDULE**

MARK	SIZE	No.	LENGTH	TYPE	LOCATION
S400	4	6	44'-1"	STR	CURB LONG
S401	4	2	14'-8"	STR	CURB SHORT #1
S402	4	2	4'-8"	STR	CURB SHORT #2
S500	5	27	44'-0"	STR	FOOTING LONG
S501	5	12	14'-6"	STR	FOOTING SHORT
S502	5	129	2'-9"	STR	FOOTING DOWEL
S550	5	322	4'-1"	U-BAR	FOOTING STIRRUP

**CROSBY #3  
REINFORCING SCHEDULE**

MARK	SIZE	No.	LENGTH	TYPE	LOCATION
S400	4	6	33'-4"	STR	CURB LONG
S401	4	4	14'-8"	STR	CURB SHORT
S500	5	27	33'-4"	STR	FOOTING LONG
S501	5	12	14'-6"	STR	FOOTING SHORT
S502	5	97	2'-9"	STR	FOOTING DOWEL
S550	5	258	4'-1"	U-BAR	FOOTING STIRRUP



S550 DETAIL  
SCALE: N.T.S.

Scale:		Designed by:	
No.	Revision	By	Date
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE			
Designed	BRG	11\17	Checked RBM 11\17
Drawn	ERB	11\17	In Charge of RAL 11\17



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THE GOLD STAR  
MEMORIAL HIGHWAY

MAINTENANCE GARAGE EXTENSIONS  
PROPOSED SLAB-ON-GRADE DETAILS II

MTA PROJECT MANAGER: BRIAN TADDEO, PE

CONTRACT: 2018.23

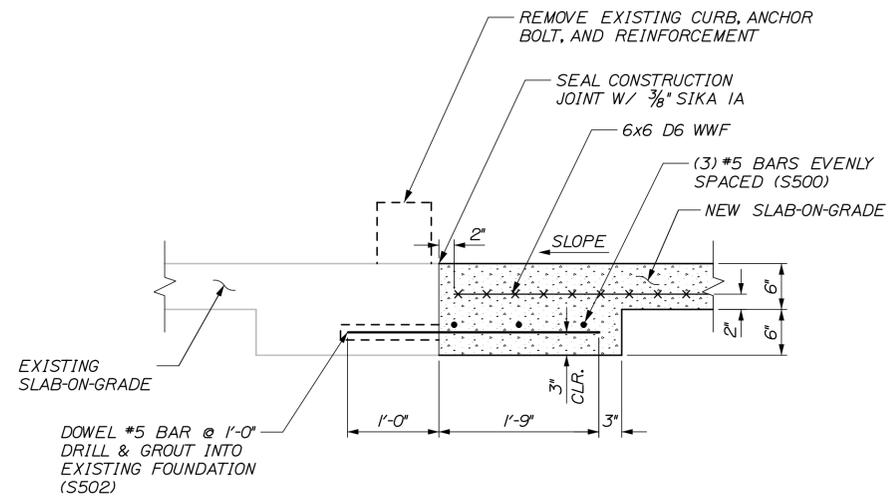
SHEET NUMBER: S22

23 OF 58

Filename: 023\_Proposed Slab on Grade Details II.dgn

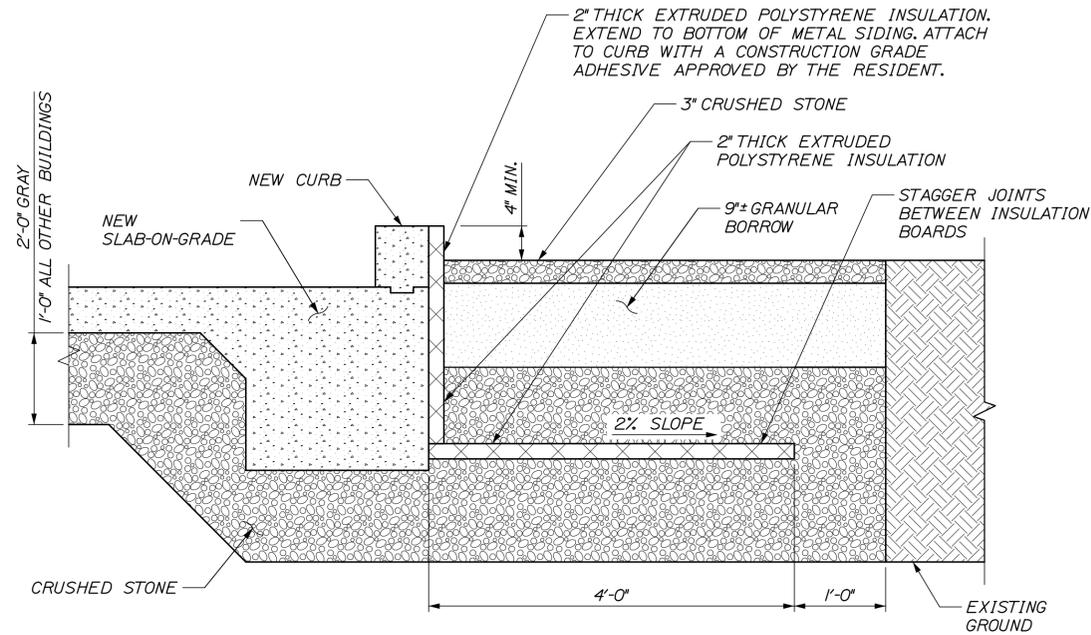
Date: 11/12/2018

Filename: 024\_Proposed Slab on Grade Details III.dgn



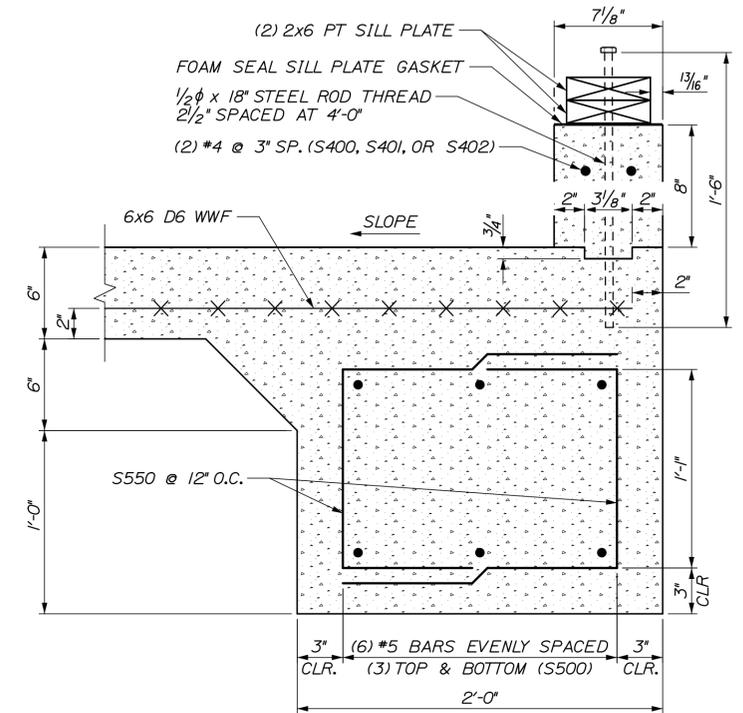
**SECTION A-A**  
**EXISTING AND NEW FOUNDATION INTERFACE DETAILS**  
 SCALE: 1" = 1'-0"

NOTE: 12" GRAVEL BASE REQUIRED UNDER CONCRETE SLAB. CONCRETE SHALL HAVE A MINIMUM DESIGN STRENGTH OF 4,000PSI



**BACKWALL INSULATION DETAIL**  
 SCALE: 1" = 1'-0"

NOTE: DRIVE THREE OR FOUR 3/8 x 6" POINTED HARDWOOD DOWEL PEGS THROUGH EACH INSULATION PANEL TO SECURE FOR TIGHT JOINTS DURING BACKFILLING



**SECTION B-B**  
**CURB AND ANCHOR BOLT DETAIL**  
 SCALE: 2" = 1'-0"

NOTE: 12" GRAVEL BASE REQUIRED UNDER CONCRETE SLAB EXCEPT 24" GRAVEL BASE AT GRAY GARAGE

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CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE				By	Date	By	Date		
				Designed	BRG	11\17	Checked	RBM	11\17
				Drawn	ERB	11\17	In Charge of	RAL	11\17

Scale:				Designed by:					
No.	Revision	By	Date	 HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE				By	Date	By	Date		
				Designed	BRG	11\17	Checked	RBM	11\17
				Drawn	ERB	11\17	In Charge of	RAL	11\17

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

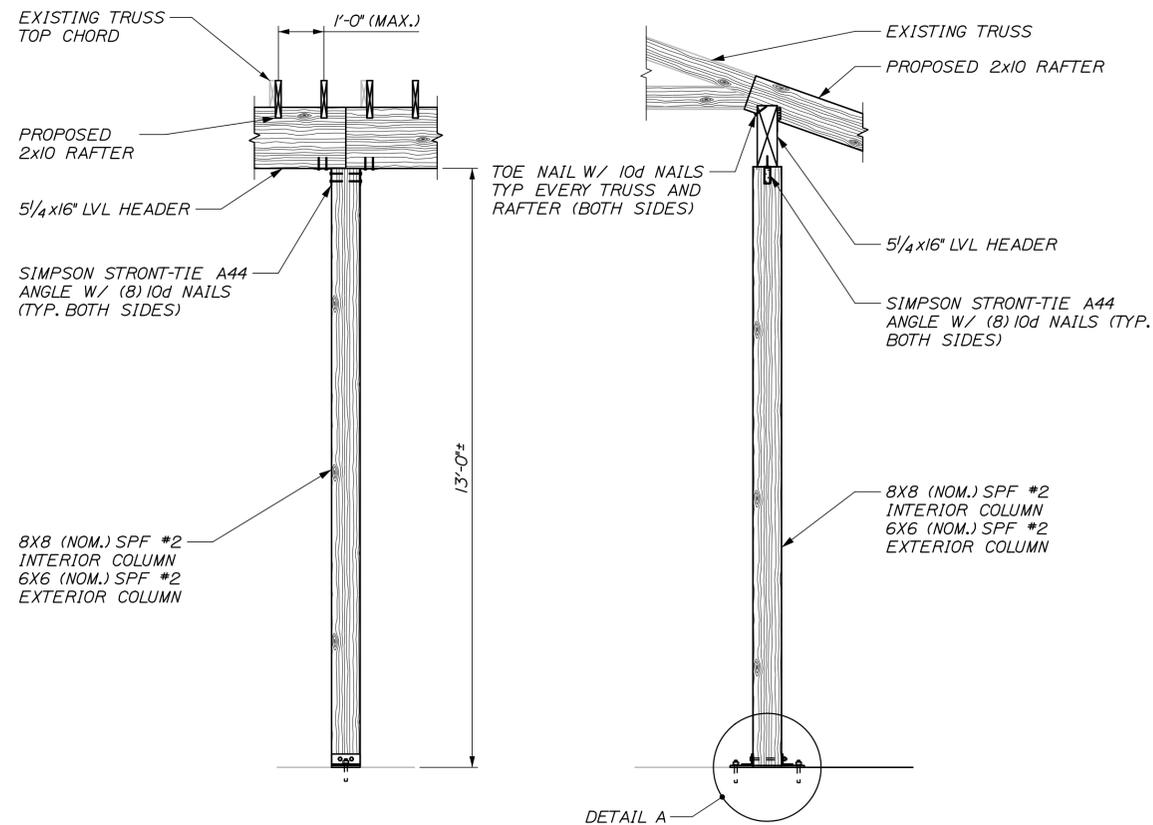
PROPOSED SLAB-ON-GRADE DETAILS III

SHEET NUMBER: S23

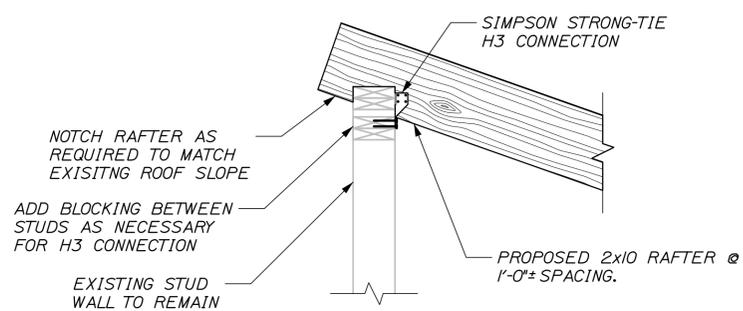
CONTRACT: 2018.23

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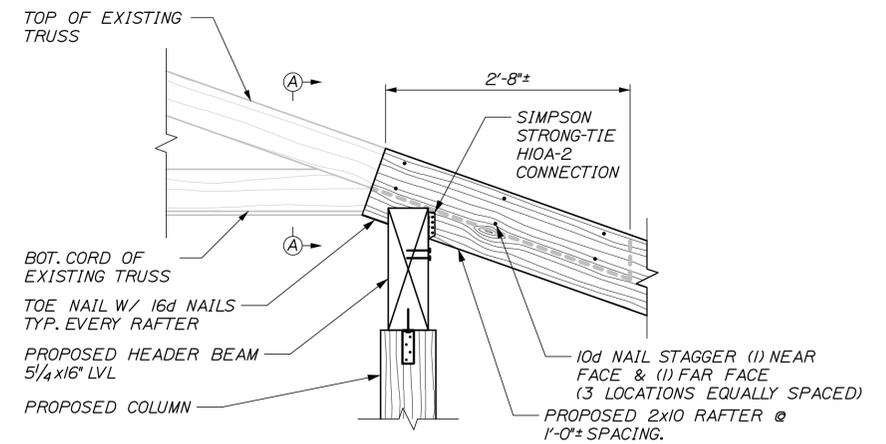
Date: 11/12/2018



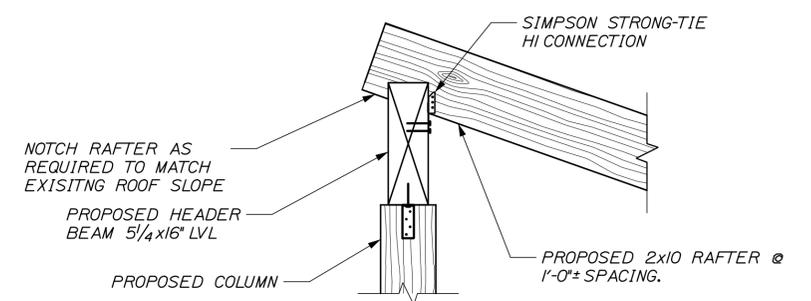
**PROPOSED COLUMN DETAILS**  
SCALE: 1/2" = 1'-0"



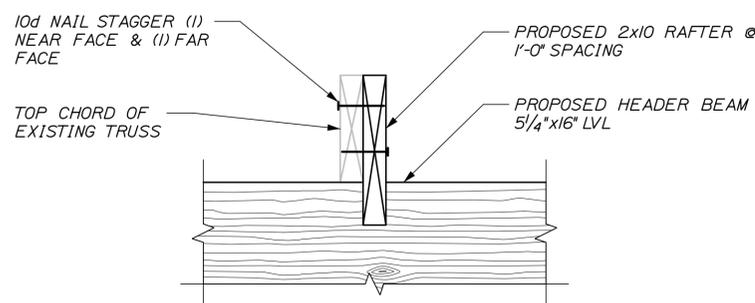
**PROPOSED RAFTER CONNECTION AT EXISTING WALL**  
SCALE: 1" = 1'-0"



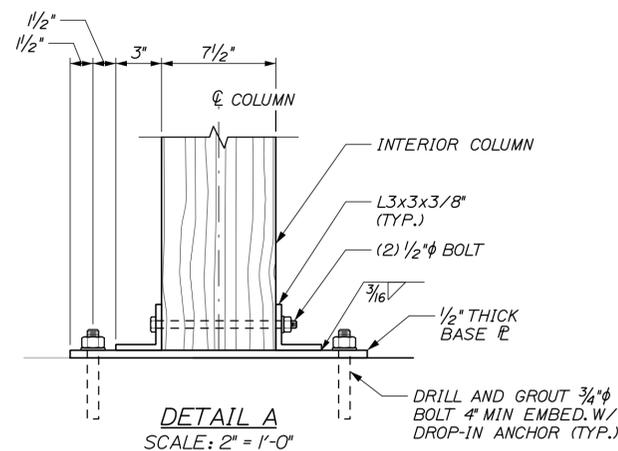
**PROPOSED RAFTER CONNECTION DETAIL AT TRUSS**  
SCALE: 1" = 1'-0"



**PROPOSED RAFTER CONNECTION DETAIL BETWEEN TRUSSES**  
SCALE: 1" = 1'-0"



**SECTION A-A**  
SCALE: 2" = 1'-0"



**DETAIL A**  
SCALE: 2" = 1'-0"

**NOTES:**

1. STEEL BASE PLATE AND CONNECTION ANGLES SHALL BE ASTM A36.
2. ANCHOR BOLTS SHALL BE ASTM F3125 GRADE A325, TYPE 1.
3. ALL STRUCTURAL STEEL AND ANCHOR BOLTS SHALL BE HOT DIP GALVANIZED.

Filename: 025\_Proposed Column & Header Details.dgn

No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

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THE GOLD STAR  
MEMORIAL HIGHWAY

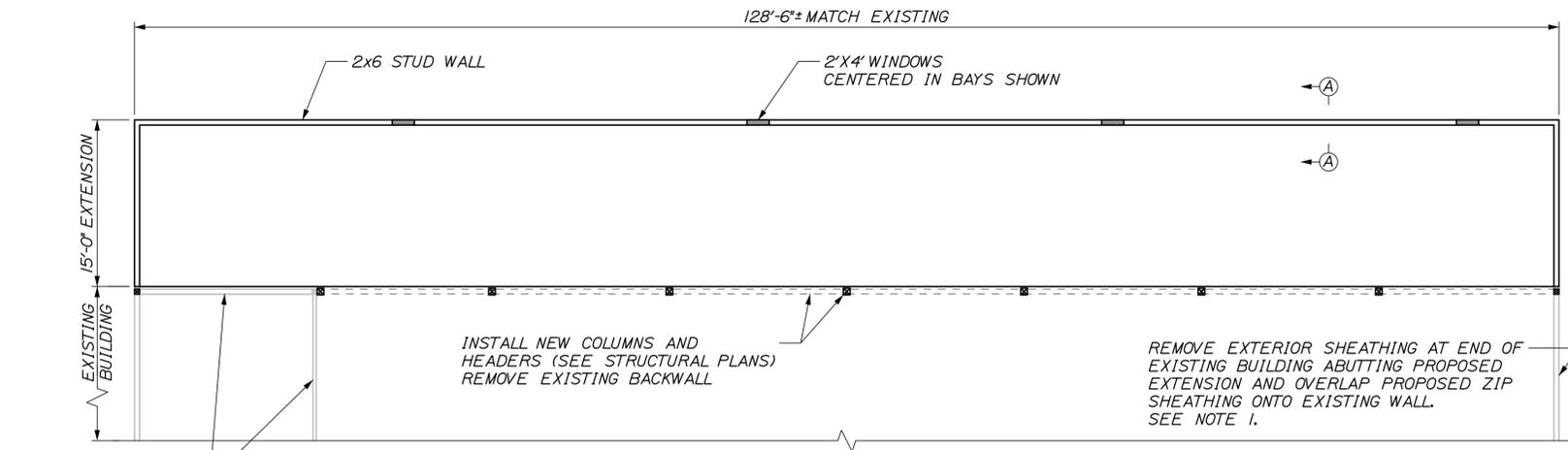
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

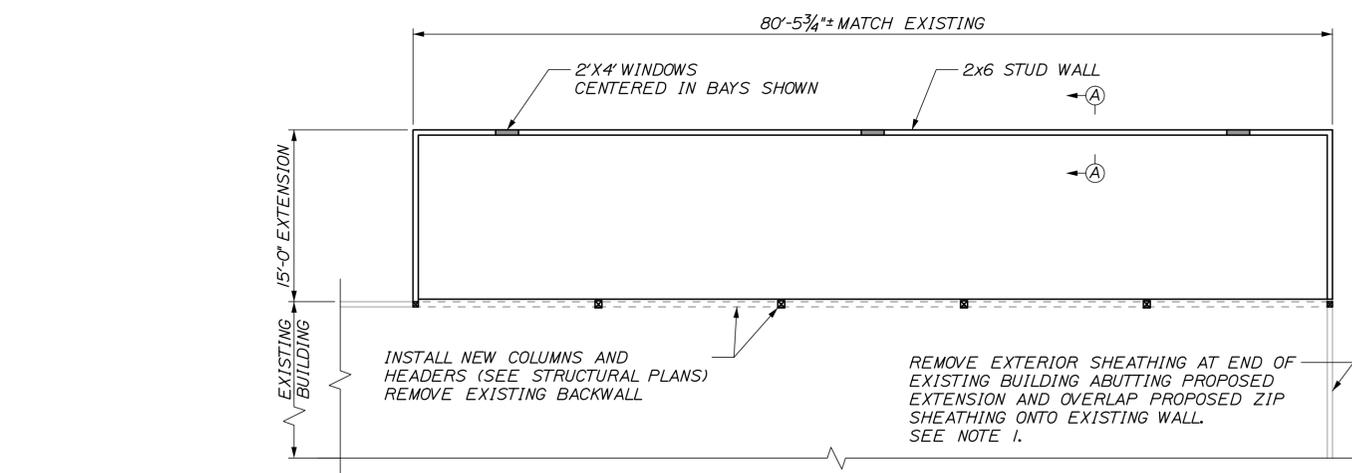
PROPOSED COLUMN AND HEADER DETAILS

SHEET NUMBER: S24  
CONTRACT: 2018.23  
25 OF 58

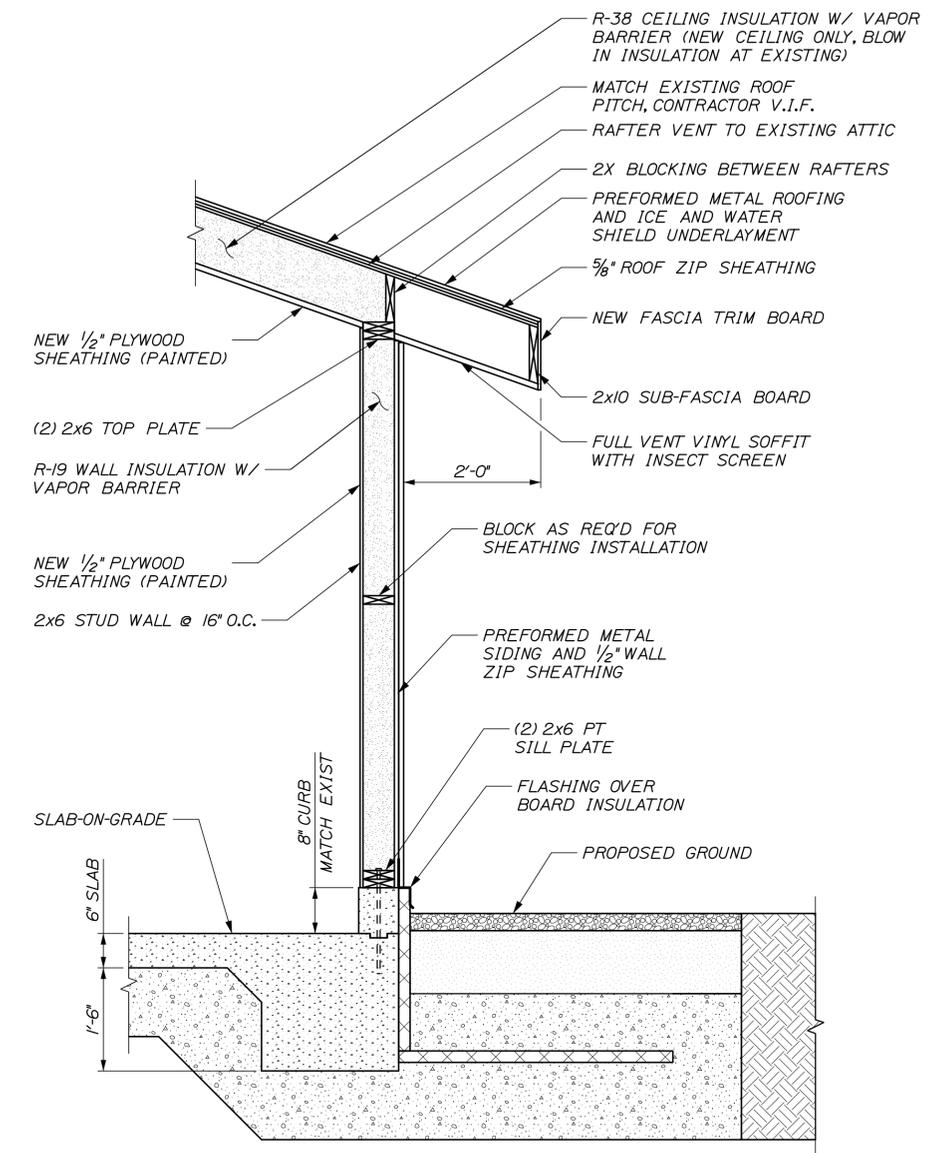
Date: 11/12/2018



ARCHITECTURAL PLAN - KENNEBUNK #1, KENNEBUNK #2, AND GRAY  
SCALE: 1/8" = 1'-0"



ARCHITECTURAL PLAN - AUBURN  
SCALE: 1/8" = 1'-0"



SECTION A-A BUILDING EXTENSION  
SCALE: 3/4" = 1'-0"

**NOTE:**  
1. OVERLAP PROPOSED SHEATHING ONTO EXISTING BUILDING TO AVOID SEAM AT NEW COLUMN LINE. THE SHEATHING JOINTS SHALL BE STAGGERED. THIS APPLIES AT ALL LOCATIONS WHERE PROPOSED WALL ABUTS EXISTING WALL.

Filename: 026\_Building Plans and Section\_1.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909

THE GOLD STAR  
MEMORIAL HIGHWAY

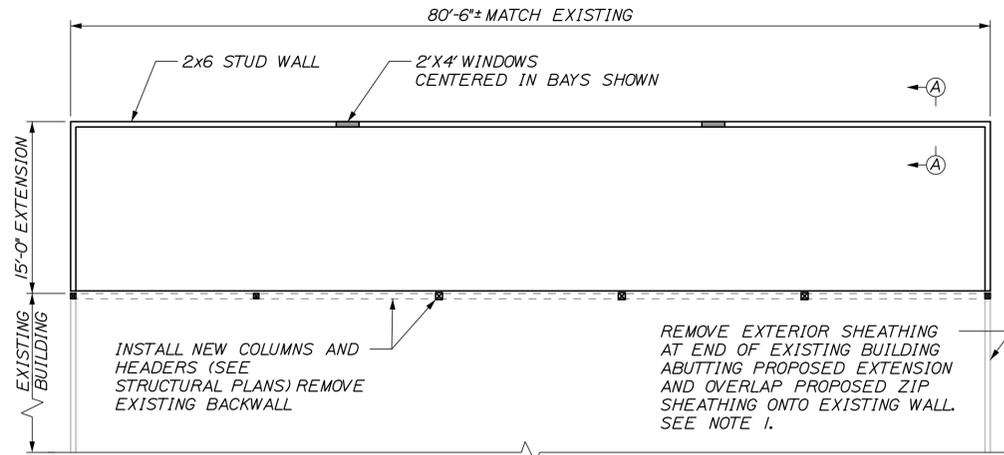
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

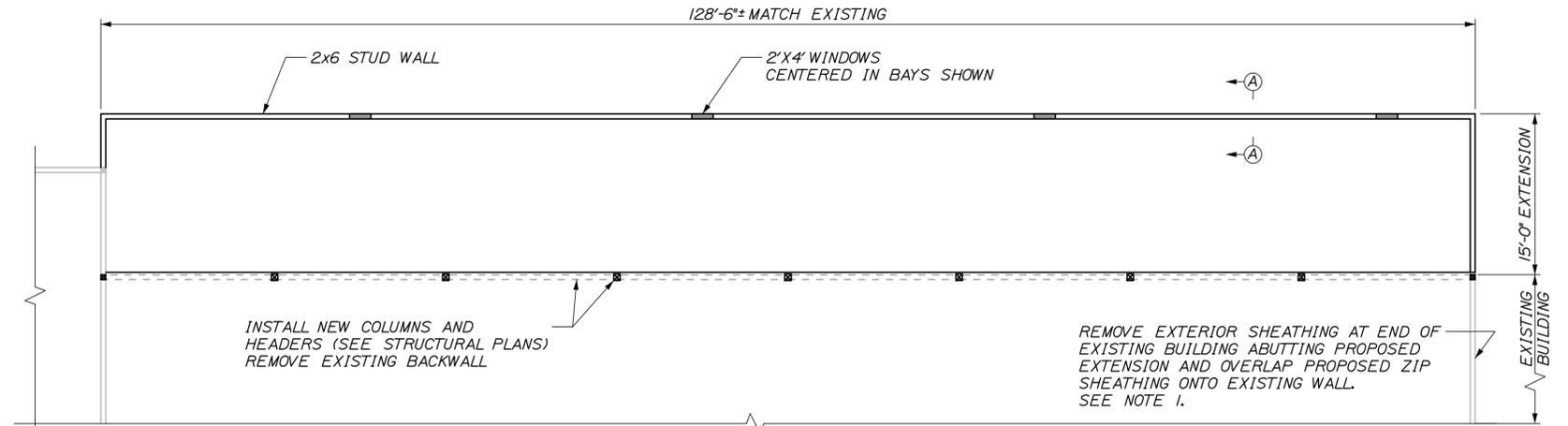
BUILDING PLAN AND SECTION 1

SHEET NUMBER: S25  
CONTRACT: 2018.23  
26 OF 58

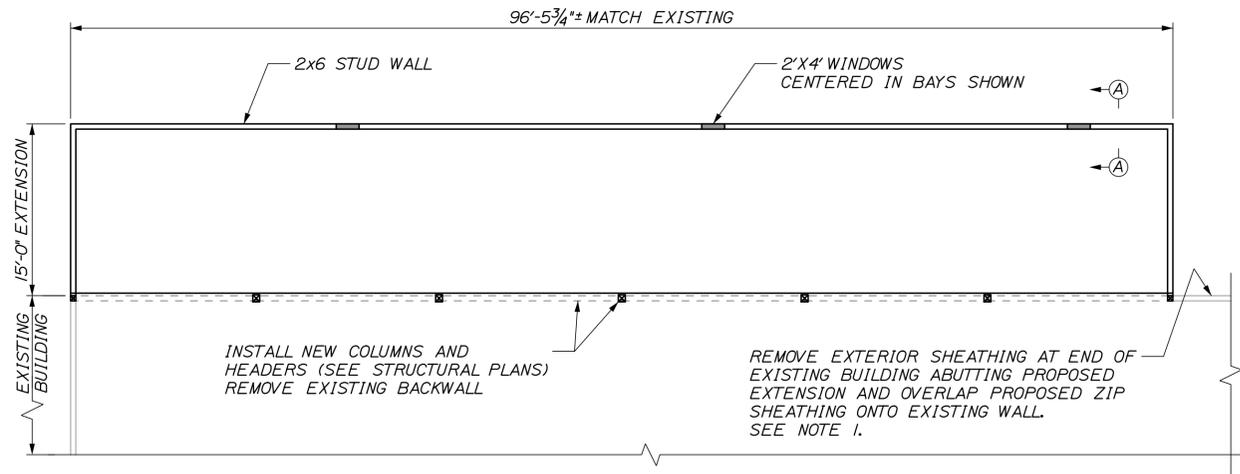
Date: 11/12/2018



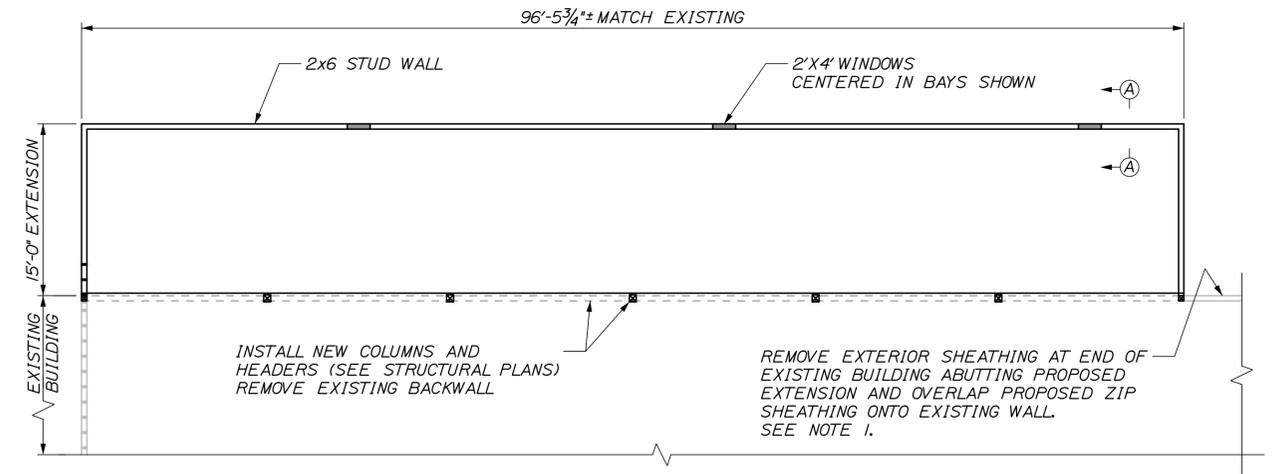
ARCHITECTURAL PLAN - CROSBY #1  
SCALE: 1/8" = 1'-0"



ARCHITECTURAL PLAN - CROSBY #2  
SCALE: 1/8" = 1'-0"



ARCHITECTURAL PLAN - CROSBY #3  
SCALE: 1/8" = 1'-0"



ARCHITECTURAL PLAN - LITCHFIELD  
SCALE: 1/8" = 1'-0"

**NOTE:**

- OVERLAP PROPOSED SHEATHING ONTO EXISTING BUILDING TO AVOID SEAM AT NEW COLUMN LINE. THE SHEATHING JOINTS SHALL BE STAGGERED. THIS APPLIES AT ALL LOCATIONS WHERE PROPOSED WALL ABUTS EXISTING WALL.
- FOR SECTION A-A, SEE "BUILDING PLAN AND SECTION 1" SHEET.

Filename: 027\_Building Plans and Section\_2.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
	BRG	11\17	Checked	RBM	11\17
	ERB	11\17	In Charge of	RAL	11\17

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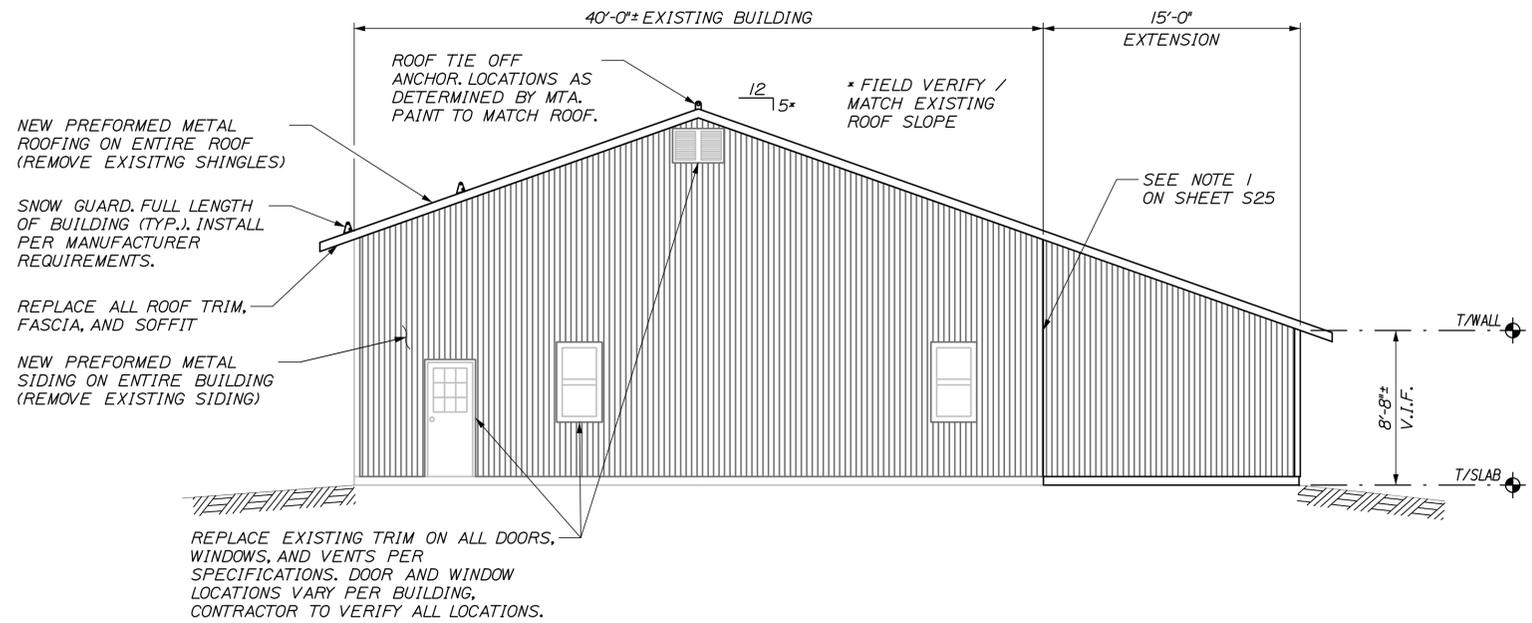
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

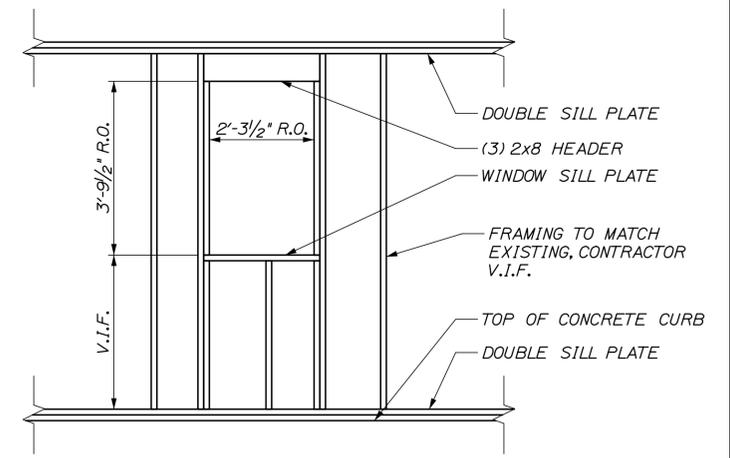
MAINTENANCE GARAGE EXTENSIONS  
BUILDING PLAN AND SECTION II

SHEET NUMBER: S26  
CONTRACT: 2018.23  
27 OF 58

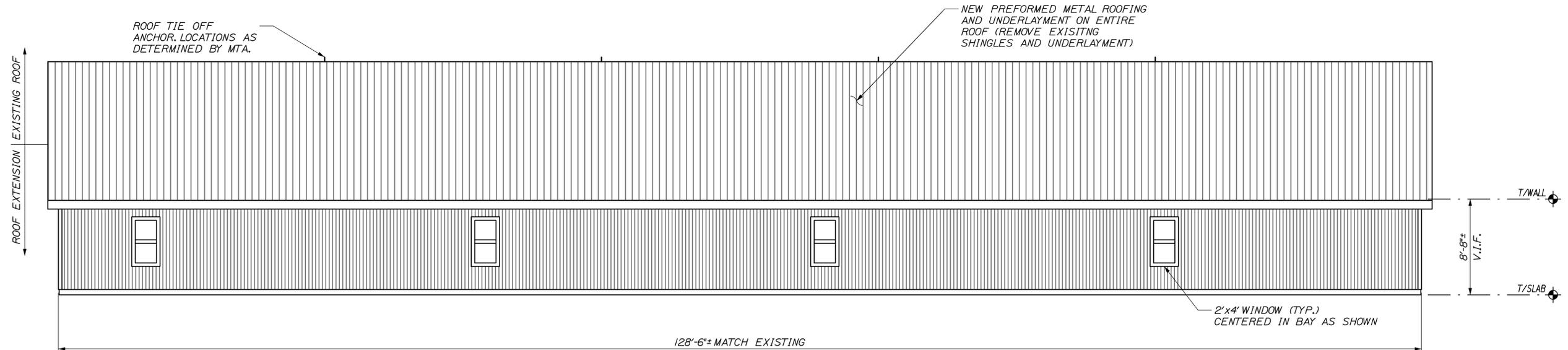
Date: 11/12/2018



**SIDE ELEVATION**  
SCALE: 3/16" = 1'-0"



**WINDOW FRAMING DETAIL**  
SCALE: 1/2" = 1'-0"  
CONTRACTOR TO VERIFY ROUGH OPENING SIZE WITH MANUFACTURER ONCE WINDOWS ARE SELECTED



**REAR ELEVATION**  
(KENNEBUNK #1 BUILDING SHOWN, OTHERS SIMILAR)  
SCALE: 3/16" = 1'-0"

Filename: 028\_Building Elevations.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

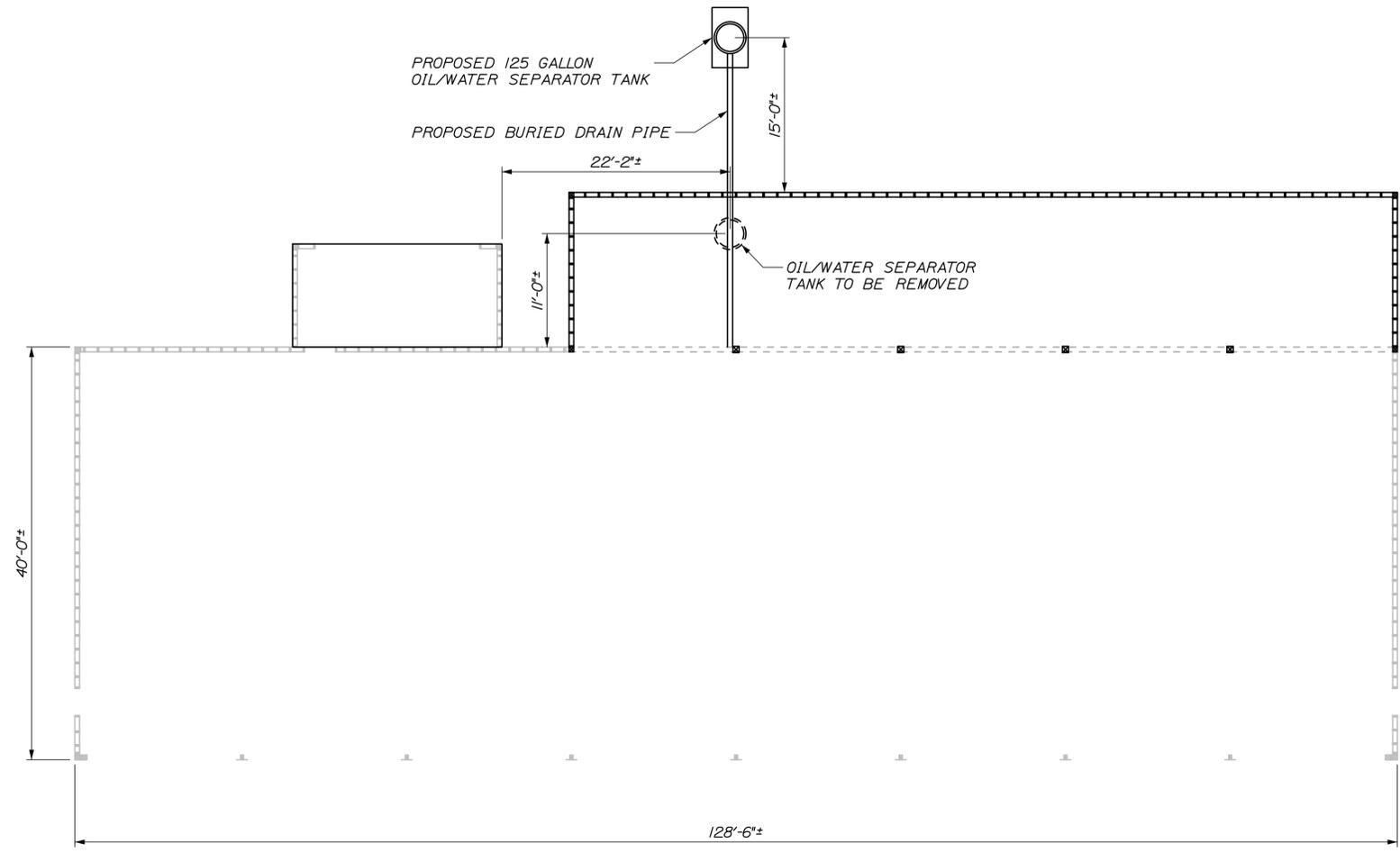
BUILDING ELEVATIONS

SHEET NUMBER: S27

CONTRACT: 2018.23

28 OF 58

Date: 11/12/2018



AUBURN GARAGE - OIL SEPARATOR TANK REPLACEMENT PLAN  
SCALE: 1/8" = 1'-0"

**NOTES:**

1. THE WORK SHOWN ON THIS SHEET APPLIES TO THE 8-BAY MAINTENANCE GARAGE IN AUBURN.
2. FOR MORE INFORMATION SEE CONTRACT SPECIFICATIONS.
3. REMOVE EXISTING OIL SEPARATOR TANKS AS SHOWN IN THE PLANS AND REPLACE WITH A 125 GALLON OIL/WATER SEPARATOR TANK.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO TANK REMOVAL AND REPLACEMENT.
5. CONTRACTOR SHALL TIE INTO EXISTING BUILDING DRAINAGE WITH NEW OIL/WATER SEPARATOR TANK.
6. PIPE INVERT ELEVATIONS SHALL BE INSTALLED SUCH THAT A CONSTANT SLOPE BE MAINTAINED TO ALLOW WATER TO FLOW THROUGH THE SYSTEM TO THE HOLDING TANKS.
7. THIS WORK SHALL BE COMPLETED BEFORE FORMING THE PROPOSED SLAB-ON-GRADE OF THE BUILDING EXTENSION.
8. CONTRACTOR IS RESPONSIBLE FOR HOOKING EXISTING DRAIN LINE INTO THE PROPOSED.

Filename: 029\_Oil&Water\_Separator\_Tank\_Details 1.dgn

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE

	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

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**THE GOLD STAR  
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MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

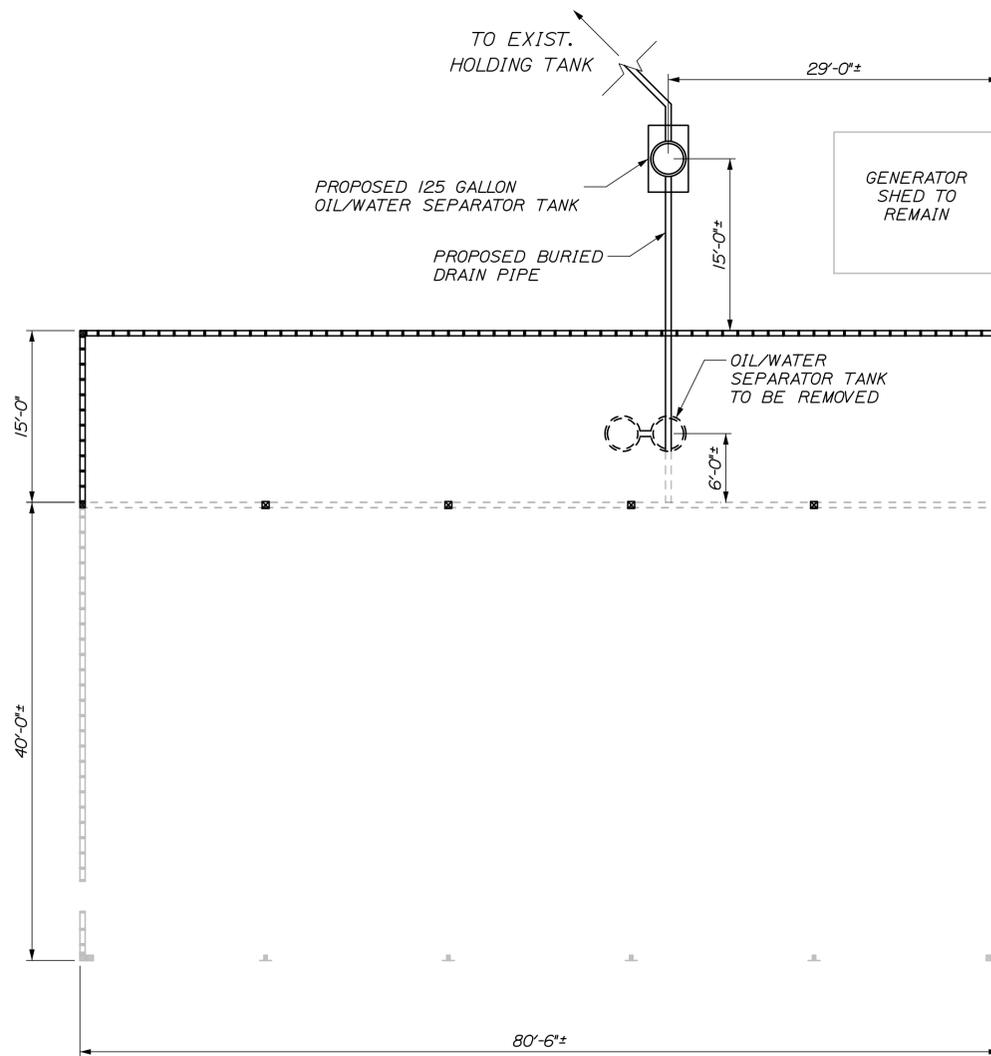
OIL/WATER SEPARATOR TANK DETAILS I

SHEET NUMBER: T1

CONTRACT: 2018.23

29 OF 58

Date: 11/12/2018



CROSBY #1 - OIL AND WATER SEPARATOR TANK DETAILS  
SCALE: 1/8" = 1'-0"

**NOTES:**

1. THE WORK SHOWN ON THIS SHEET APPLIES TO THE 5-BAY MAINTENANCE GARAGE #2 IN CROSBY.
2. FOR MORE INFORMATION SEE CONTRACT SPECIFICATIONS.
3. REMOVE EXISTING OIL SEPARATOR TANKS AS SHOWN IN THE PLANS AND REPLACE WITH TWO 125 GALLON OIL/WATER SEPARATOR TANKS.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO TANK REMOVAL AND REPLACEMENT.
5. CONTRACTOR SHALL TIE INTO EXISTING BUILDING DRAINAGE WITH NEW OIL/WATER SEPARATOR TANK.
6. PIPE INVERT ELEVATIONS SHALL BE INSTALLED SUCH THAT A CONSTANT SLOPE BE MAINTAINED TO ALLOW WATER TO FLOW THROUGH THE SYSTEM TO THE HOLDING TANKS.
7. THIS WORK SHALL BE COMPLETED BEFORE FORMING THE PROPOSED SLAB-ON-GRADE OF THE BUILDING EXTENSION.
8. CONTRACTOR IS RESPONSIBLE FOR HOOKING EXISTING DRAIN LINE INTO THE PROPOSED.
9. CONTRACTOR IS RESPONSIBLE FOR REROUTING THE DRAIN LINE FROM THE PROPOSED OIL/WATER SEPARATOR TANK TO THE EXISTING HOLDING TANK.

Filename: 030\_Oil&Water\_Separator\_Tank\_Details\_2.dgn

Scale:

Designed by:



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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MAINTENANCE GARAGE EXTENSIONS

OIL/WATER SEPARATOR TANK DETAILS II

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

MTA PROJECT MANAGER: BRIAN TADDEO, PE

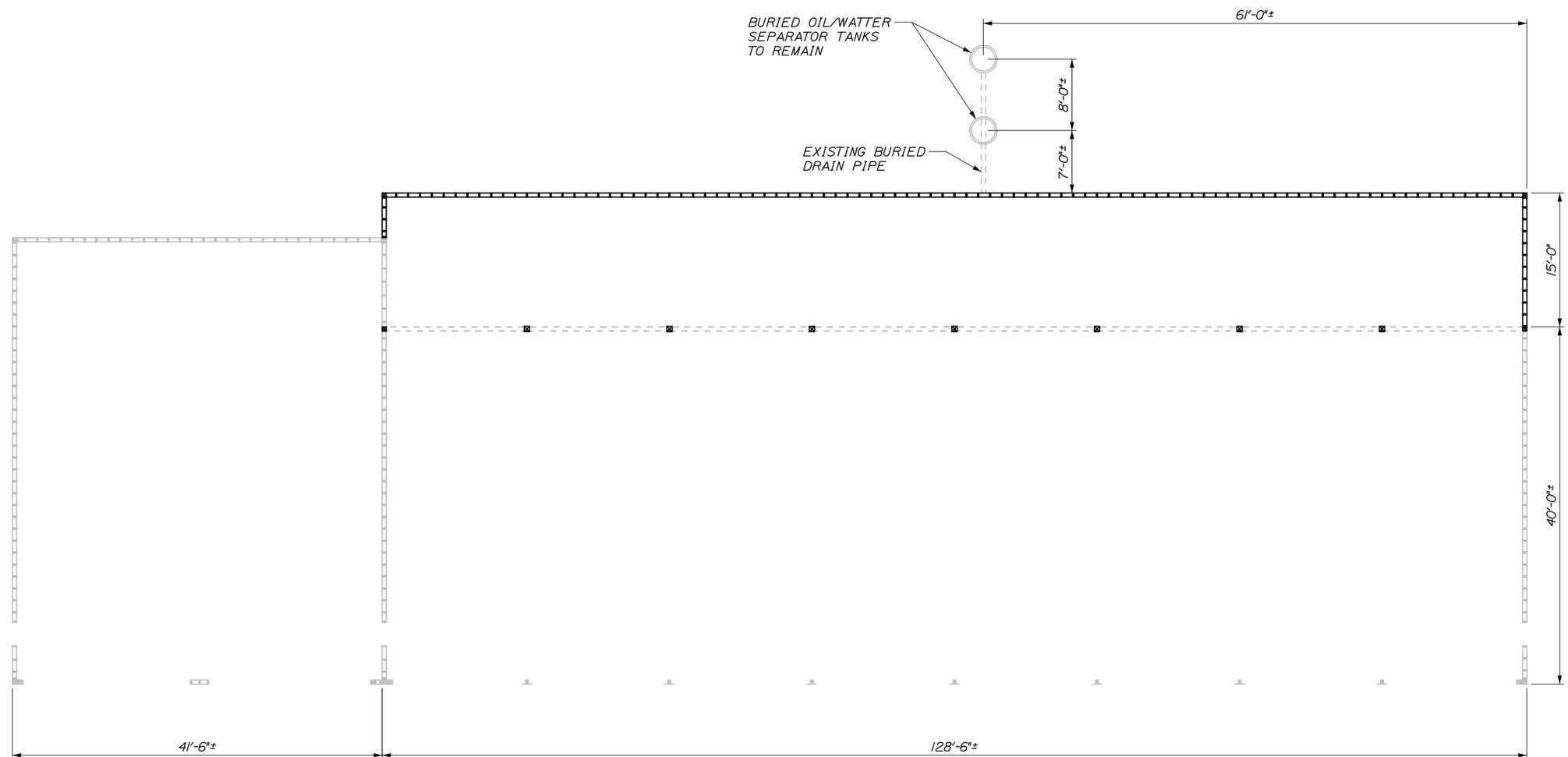
CONTRACT: 2018.23

SHEET NUMBER: T2

30 OF 58

Date: 11/12/2018

Filename: 031\_Oil&Water\_Separator\_Tank\_Details\_3.dgn



**NOTES:**

1. THE WORK SHOWN ON THIS SHEET APPLIES TO THE 8-BAY MAINTENANCE GARAGE #1 IN CROSBY.
2. FOR MORE INFORMATION SEE CONTRACT SPECIFICATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING EXISTING DRAIN PIPE FROM EXISTING BUILDING TO EXISTING OIL/WATER SEPARATOR TANK.

CROSBY #2 - OIL AND WATER SEPARATOR TANK DETAILS  
SCALE: 1/8" = 1'-0"

Scale:			
No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

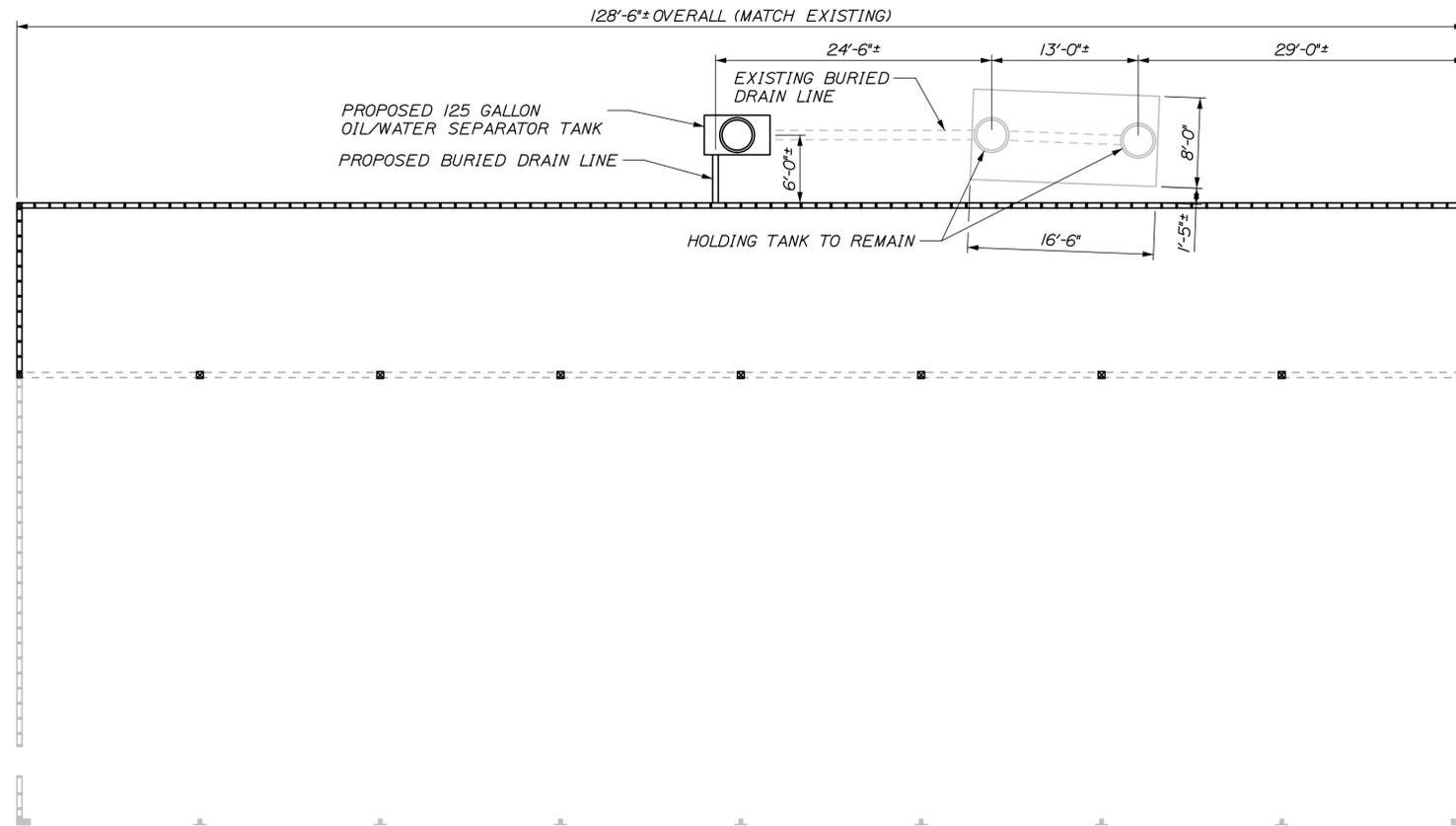
OIL/WATER SEPARATOR TANK DETAILS III

SHEET NUMBER: T3

CONTRACT: 2018.23

31 OF 58

Date: 11/12/2018



GRAY GARAGE - OIL SEPARATOR TANK REPLACEMENT PLAN  
SCALE: 1/8" = 1'-0"

**NOTES:**

1. THE WORK SHOWN ON THIS SHEET APPLIES TO THE 8-BAY MAINTENANCE GARAGE IN GRAY.
2. FOR MORE INFORMATION SEE CONTRACT SPECIFICATIONS.
3. REMOVE EXISTING OIL SEPARATOR TANKS AS SHOWN IN THE PLANS AND REPLACE WITH A 125 GALLON OIL/WATER SEPARATOR TANK.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO TANK REMOVAL AND REPLACEMENT.
5. CONTRACTOR SHALL TIE INTO EXISTING BUILDING DRAINAGE WITH NEW OIL/WATER SEPARATOR TANK.
6. PIPE INVERT ELEVATIONS SHALL BE INSTALLED SUCH THAT A CONSTANT SLOPE BE MAINTAINED TO ALLOW WATER TO FLOW THROUGH THE SYSTEM TO THE HOLDING TANKS.
7. THIS WORK SHALL BE COMPLETED BEFORE FORMING THE PROPOSED SLAB-ON-GRADE OF THE BUILDING EXTENSION.
8. CONTRACTOR IS RESPONSIBLE FOR HOOKING EXISTING DRAIN LINE INTO THE PROPOSED.

Filename: 032\_Oil&Water\_Separator\_Tank\_Details\_4.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
	BRG	11\17	Checked	RBM	11\17
	ERB	11\17	In Charge of	RAL	11\17

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
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**THE GOLD STAR  
MEMORIAL HIGHWAY**

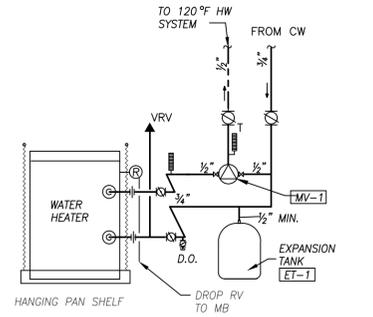
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

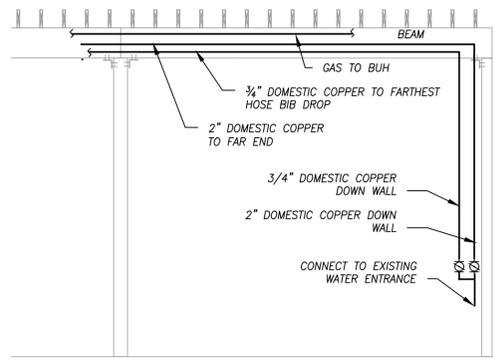
OIL/WATER SEPARATOR TANK DETAILS IV

SHEET NUMBER: T4

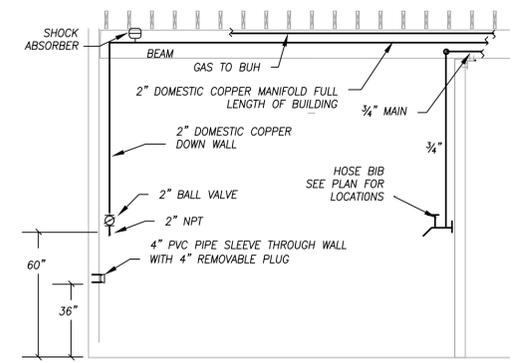
CONTRACT: 2018.23 32 OF 58



**1**  
TYP  
**HOT WATER STORAGE TANK DIAGRAM**  
SCALE: NONE



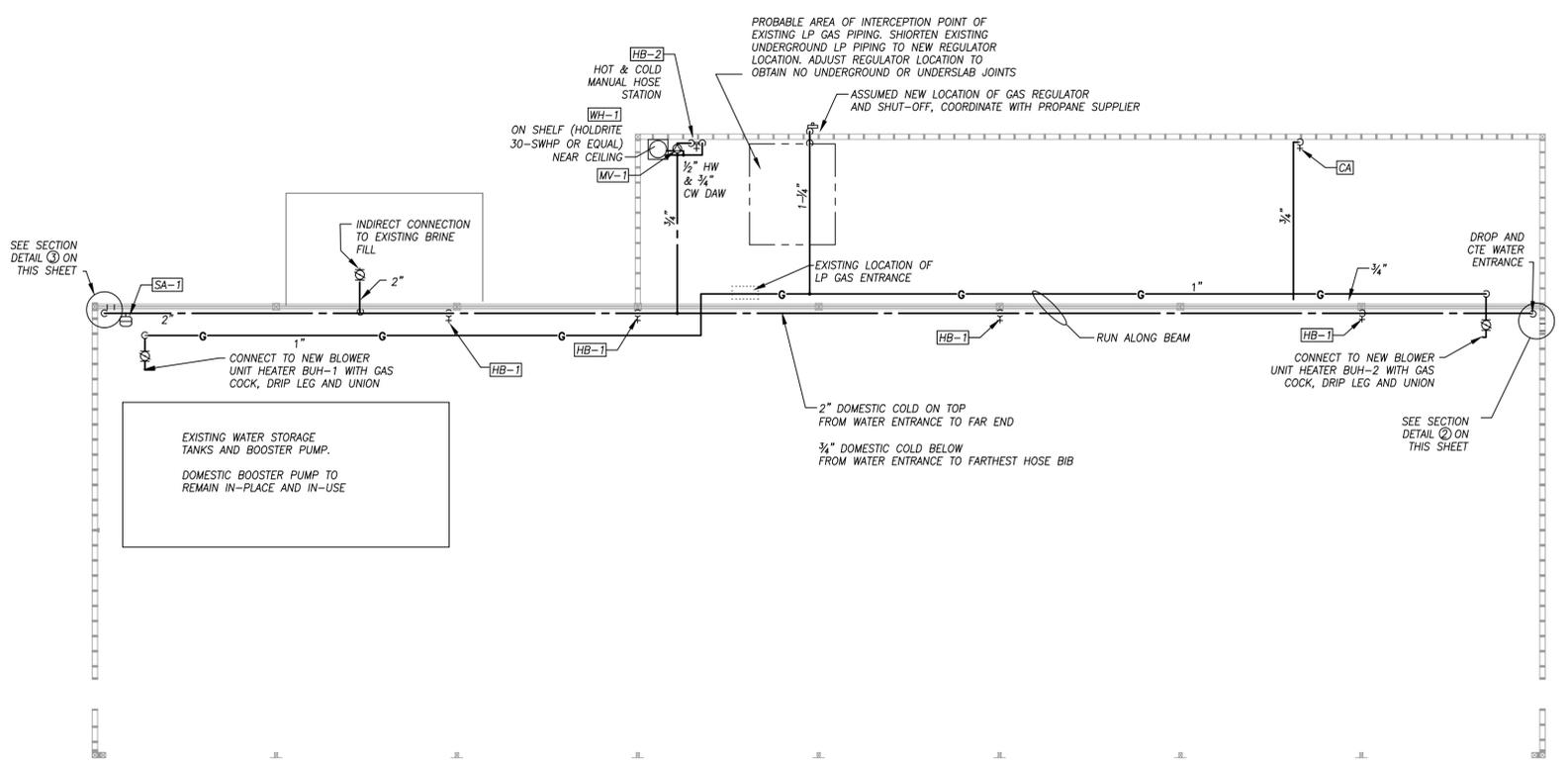
**2**  
TYP  
**SECTION AT BEAM RIGHT BAY**  
SCALE: NONE



**3**  
TYP  
**SECTION AT BEAM LEFT BAY**  
SCALE: NONE

**DEMOLITION NOTES**

- It is the Plumbing Contractor's responsibility to remove all existing plumbing and compressed air piping that is not being reused from the jobsite.
- Items to be removed include, but are not limited to:
  - Existing hot water heater including flues if existing
  - Existing gas piping and accessories
  - Existing domestic hot & cold water piping and accessories
  - Air compressor piping and accessories



**AUBURN PLAN VIEW**  
SCALE: 1/8" = 1'-0"

**GENERAL NOTES**

- All work shall be in accordance with the Maine State (Uniform) Plumbing Code, local codes and ordinances, National Fire Code (NFPA), or these plans or specifications, whichever is more strict.
- All drawings are schematic only, and are intended to indicate the intent, extent, and general arrangement of work. They are not meant to show every fitting, change of direction or every situation. Verify locations in the field. Work indicated shall be furnished complete to perform the function intended.
- Carefully coordinate the space requirements and location of piping with the other trade contractors.
- This contractor shall make all final plumbing connections to equipment/fixtures provided by other contractors.
- No structural members shall be cut without approval of the Structural Engineer.
- All plumbing shall be supported from the building structure. Hangers longer than 12" will be seismically braced if required by the International Building Code.
- ANY pipe penetrations through a fire rated wall or floor shall have a UL rated fire stop system rated to match the rating of the wall assembly, as per the NFPA.
- All above ground domestic hot water piping shall be insulated unless otherwise specified.
- Run all water and drain piping on warm side of building insulation. No lines shall be run in exterior walls, unless directly indicated.
- All Domestic water piping shall be type "K" or "L" copper, type "M" is prohibited.
- All Compressed Air piping to be schedule 40 Black Iron

**WATER SPEC. SCHEDULE**

TAG	ITEM	CW	HW	OUTLET	REMARKS
ET-1	EXPANSION TANK	1/2"	-	-	
HB-1	HOSE BIB W/ VB	3/4"	-	3/4" GHT	
HB-2	HOT AND COLD WATER MIXING STATION	3/4"	1/2"	3/4" GHT	
MV-1	MIXING VALVE	1/2"	1/2"	1/2"	
SA-1	SHOCK ABSORBER	1/2 OR 3/4"	-	-	P.D.I. A

**WATER HEATER SCHEDULE**

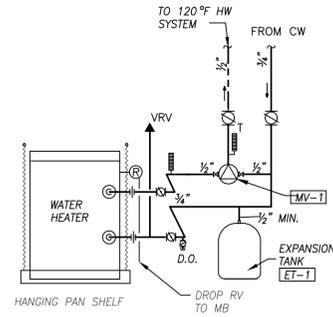
TAG	ITEM	GAL	WATTS	VOLTS	PH	SPECIFICATION & REMARKS
WH-1	DOMESTIC HOT WATER	10	4500	240	1	A. O. SMITH EIC-10, ELEC. BY EC W/ HOLDRITE 30-SWHP WALL SHELF

**LEGEND**

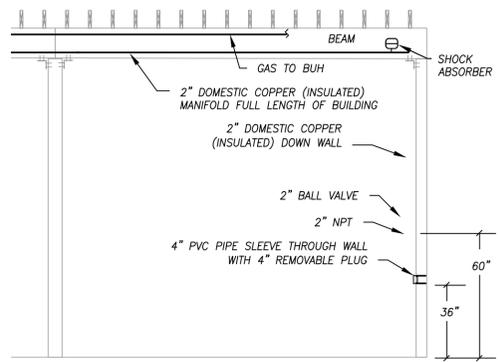
⊙	AT	GC	GENERAL CONTRACTOR	— G —	FUEL GAS PIPING ABOVE SLAB
A	AMPS,	NPT	NATIONAL PIPE THREAD	— — — — —	DOMESTIC COLD WATER
AFF	ABOVE FINISHED FLOOR	OD	OUTSIDE DIAMETER	— A —	COMPRESSED AIR
BLV	BALL VALVE	PC	PLUMBING CONTRACTOR	⊘	BALL VALVE
CA	COMPRESSED AIR	RAW	RISE AT WALL	⊕	VERTICAL BALL VALVE
COORD	COORDINATION	TBD	TO BE DETERMINED	○	LINE UP TO FLOOR ABOVE
CTE	CONNECT TO EXISTING	TYP	TYPICAL	⊖	DROP/RISE IN LINE
DAW	DROP AT WALL	UAW	UP AT WALL	⊕	TEE -DROP
DAC	DROP ALONG COLUMN	VIF	VERIFY IN FIELD		
EQ	EQUAL	W/	WITH		
G	GAS (FUEL)	WC	WATER COLUMN		



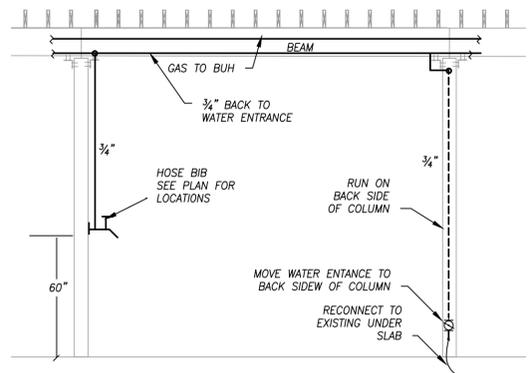
Scale:		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909		 <b>THE GOLD STAR MEMORIAL HIGHWAY</b>		MAINTENANCE GARAGE EXTENSIONS AUBURN PLUMBING PLAN, NOTES AND SCHEDULES																											
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision							By	Date													CONSULTANT PROJECT MANAGER: KFM		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>EJP 11/18</td> <td>Checked</td> <td>KFM 11/18</td> </tr> <tr> <td>Drawn</td> <td>EJP 11/18</td> <td>In Charge of</td> <td>EJP 11/18</td> </tr> </tbody> </table>		By	Date	By	Date	Designed	EJP 11/18	Checked	KFM 11/18	Drawn	EJP 11/18
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Designed	EJP 11/18	Checked	KFM 11/18																																		
Drawn	EJP 11/18	In Charge of	EJP 11/18																																		



**HOT WATER STORAGE TANK DIAGRAM**  
 1 TYP  
 SCALE: NONE



**SECTION AT BEAM RIGHT BAY**  
 2 TYP  
 SCALE: NONE



**SECTION AT BEAM MIDDLE BAY**  
 2 TYP  
 SCALE: NONE

**DEMOLITION NOTES**

- It is the Plumbing Contractor's responsibility to remove all existing plumbing and compressed air piping that is not being reused from the jobsite.
- Items to be removed include, but are not limited to:
  - Existing hot water heater including flues if existing
  - Existing gas piping and accessories
  - Existing domestic hot & cold water piping and accessories
  - Air compressor piping and accessories

**GENERAL NOTES**

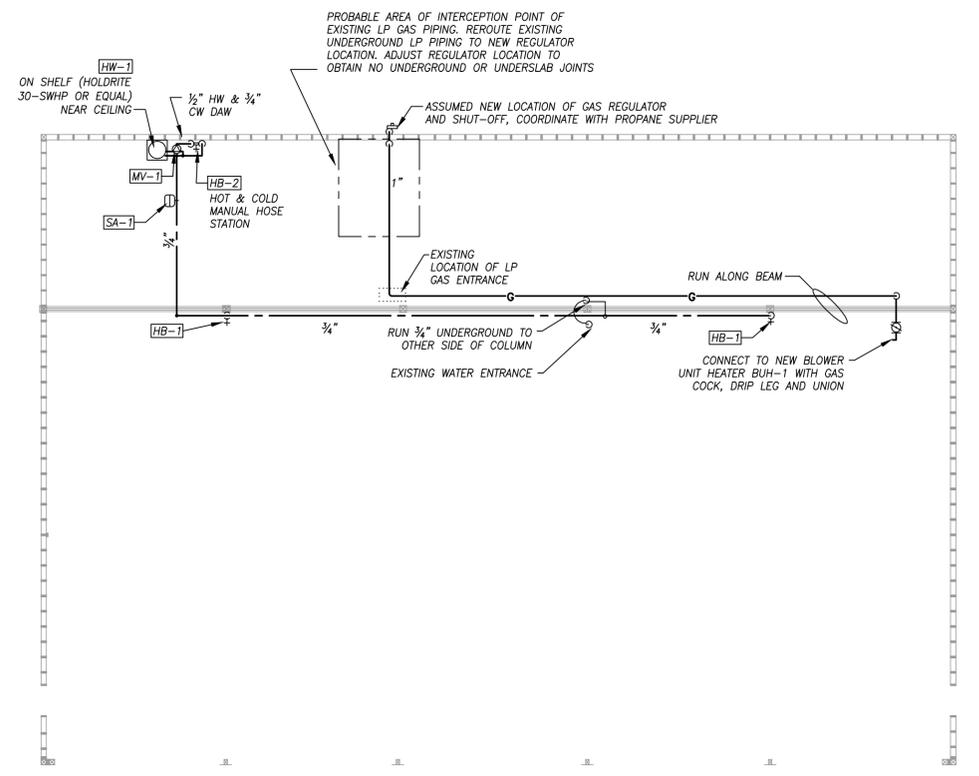
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- ANY pipe penetrations through a fire rated wall or floor shall have a UL rated fire stop system rated to match the rating of the wall assembly, as per the NFPA.
- All above ground domestic hot water piping shall be insulated unless otherwise specified.
- Run all water and drain piping on warm side of building insulation. No lines shall be run in exterior walls, unless directly indicated.
- All Domestic water piping shall be type "K" or "L" copper, type "M" is prohibited.
- All Compressed Air piping to be schedule 40 Black Iron

**WATER SPEC. SCHEDULE**

TAG	ITEM	CW	HW	OUTLET	REMARKS
ET-1	EXPANSION TANK	1/2"	-	-	
HB-1	HOSE BIB W/ VB	3/4"	-	3/4" GHT	
HB-2	HOT AND COLD WATER MIXING STATION	3/4"	1/2"	3/4" GHT	
MV-1	MIXING VALVE	1/2"	1/2"	1/2"	
SA-1	SHOCK ABSORBER	1/2 OR 3/4"	-	-	P.D.I. A

**WATER HEATER SCHEDULE**

TAG	ITEM	GAL	WATTS	VOLTS	PH	SPECIFICATION & REMARKS
WH-1	DOMESTIC HOT WATER	10	4500	240	1	A. O. SMITH EIC-10, ELEC. BY EC W/ HOLDRITE 30-SWHP WALL SHELF



**CROSBY #1 PLAN VIEW**  
 SCALE: 1/8" = 1'-0"

**LEGEND**

@	AT	CC	GENERAL CONTRACTOR	— G —	FUEL GAS PIPING ABOVE SLAB
A	AMPS,	NPT	NATIONAL PIPE THREAD	— — —	DOMESTIC COLD WATER
AFF	ABOVE FINISHED FLOOR	OD	OUTSIDE DIAMETER	— A —	COMPRESSED AIR
BLV	BALL VALVE	PC	PLUMBING CONTRACTOR	— (V) —	BALL VALVE
CA	COMPRESSED AIR	RAW	RISE AT WALL	— (V) —	VERTICAL BALL VALVE
COORD	COORDINATION	TBD	TO BE DETERMINED	— (V) —	LINE UP TO FLOOR ABOVE
CTE	CONNECT TO EXISTING	TYP	TYPICAL	— (V) —	DROP/RISE IN LINE
DAW	DROP AT WALL	UAW	UP AT WALL	— (V) —	TEE -DROP
DAC	DROP ALONG COLUMN	VIF	VERIFY IN FIELD		
EQ	EQUAL	W/	WITH		
G	GAS (FUEL)	WC	WATER COLUMN		



Scale:

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: KFM

	By	Date		By	Date
Designed	EJP	11/18	Checked	KFM	11/18
Drawn	EJP	11/18	In Charge of	EJP	11/18

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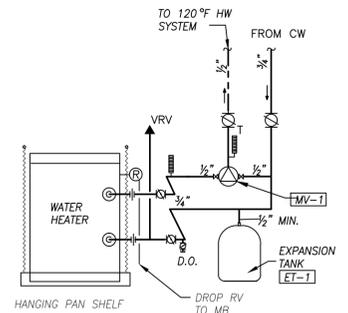
**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

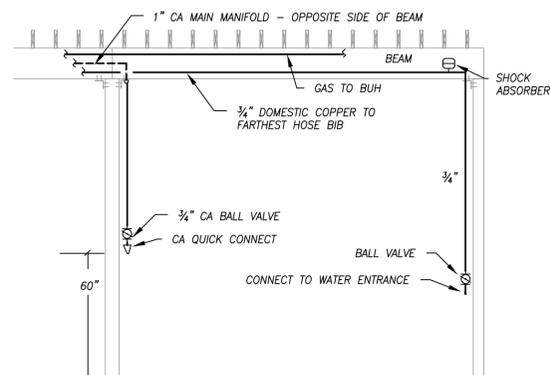
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
 CROSBY #1  
 PLUMBING PLAN, NOTES AND SCHEDULES

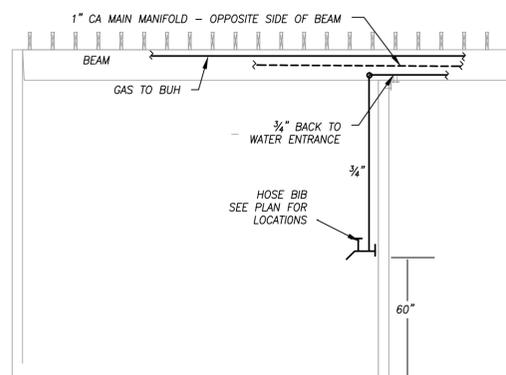
SHEET NUMBER:P2  
 CONTRACT:2018.23  
 34 OF 58



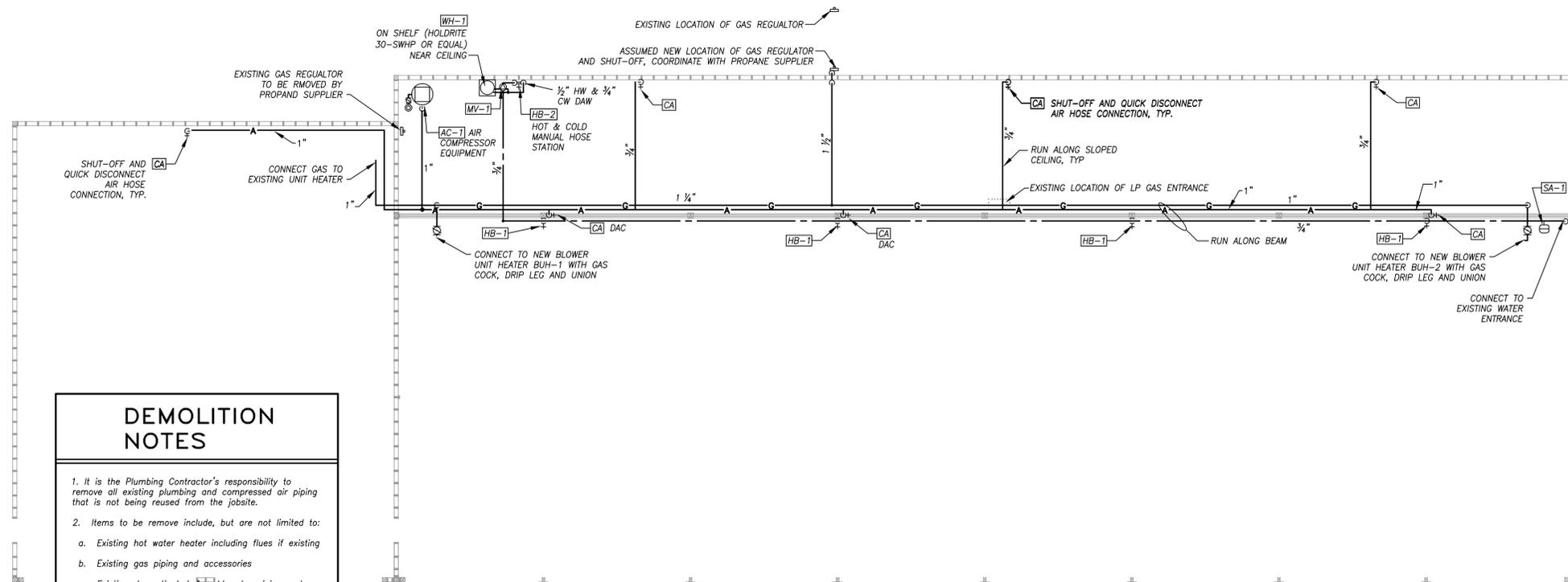
**1**  
TYP  
**HOT WATER STORAGE TANK DIAGRAM**  
SCALE: NONE



**2**  
TYP  
**SECTION AT BEAM RIGHT BAY**  
SCALE: NONE



**3**  
TYP  
**SECTION AT BEAM MIDDLE BAY**  
SCALE: NONE



**CROBY #2 PLAN VIEW**  
SCALE: 1/8" = 1'-0"

**DEMOLITION NOTES**

- It is the Plumbing Contractor's responsibility to remove all existing plumbing and compressed air piping that is not being reused from the jobsite.
- Items to be remove include, but are not limited to:
  - Existing hot water heater including flues if existing
  - Existing gas piping and accessories
  - Existing domestic hot & cold water piping and accessories
  - Air compressor piping and accessories

**GENERAL NOTES**

- All work shall be in accordance with the Maine State (Uniform) Plumbing Code, local codes and ordinances, National Fire Code (NFPA), or these plans or specifications, whichever is more strict.
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- ANY pipe penetrations through a fire rated wall or floor shall have a UL rated fire stop system rated to match the rating of the wall assembly, as per the NFPA.
- All above ground domestic hot water piping shall be insulated unless otherwise specified.
- Run all water and drain piping on warm side of building insulation. No lines shall be run in exterior walls, unless directly indicated.
- All Domestic water piping shall be type "K" or "L" copper, type "M" is prohibited.
- All Compressed Air piping to be schedule 40 Black Iron

**WATER SPEC. SCHEDULE**

TAG	ITEM	CW	HW	OUTLET	REMARKS
ET-1	EXPANSION TANK	1/2"	-	-	
HB-1	HOSE BIB W/ VB	3/4"	-	3/4" GHT	
HB-2	HOT AND COLD WATER MIXING STATION	3/4"	1/2"	3/4" GHT	
MV-1	MIXING VALVE	1/2"	1/2"	1/2"	
SA-1	SHOCK ABSORBER	1/2" OR 3/4"	-	-	P.D.I. A

**WATER HEATER SCHEDULE**

TAG	ITEM	GAL	WATTS	VOLTS	PH	SPECIFICATION & REMARKS
WH-1	DOMESTIC HOT WATER	10	4500	240	1	A. O. SMITH EJC-10, ELEC. BY EC W/ HOLDRITE 30-SWHP WALL SHELF

**LEGEND**

⊙	AT	GC	GENERAL CONTRACTOR	— G —	FUEL GAS PIPING ABOVE SLAB
A	AMPS,	NPT	NATIONAL PIPE THREAD	— — —	DOMESTIC COLD WATER
AFF	ABOVE FINISHED FLOOR	OD	OUTSIDE DIAMETER	— A —	COMPRESSED AIR
BLV	BALL VALVE	PC	PLUMBING CONTRACTOR	⊙	BALL VALVE
CA	COMPRESSED AIR	RAW	RISE AT WALL	⊕	VERTICAL BALL VALVE
COORD	COORDINATION	TBD	TO BE DETERMINED	— ○ —	LINE UP TO FLOOR ABOVE
CTE	CONNECT TO EXISTING	TYP	TYPICAL	— ⊕ —	DROP/RISE IN LINE
DAW	DROP AT WALL	UAW	UP AT WALL	— ⊕ —	TEE -DROP
DAC	DROP ALONG COLUMN	W/	WITH		
EQ	EQUAL	WC	WATER COLUMN		
G	GAS (FUEL)				



Scale:

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: KFM

	By	Date		By	Date
Designed	EJP	11/18	Checked	KFM	11/18
Drawn	EJP	11/18	In Charge of	EJP	11/18

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909

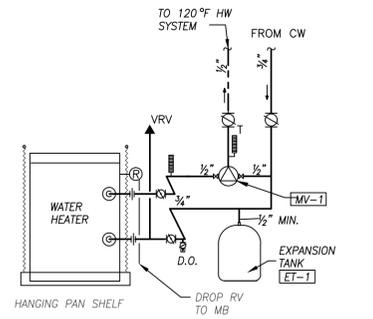
**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

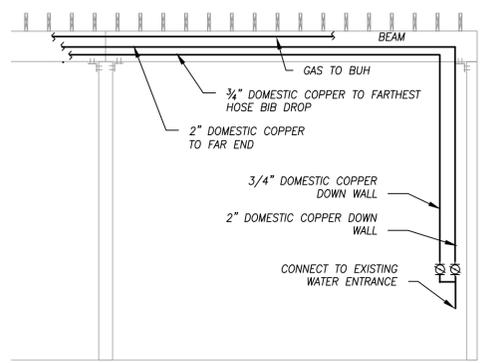
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
CROSBY #2  
PLUMBING PLAN, NOTES AND SCHEDULES

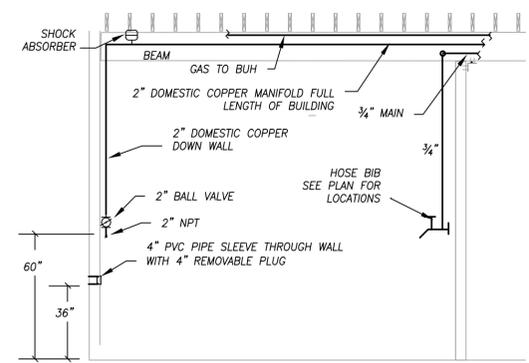
SHEET NUMBER:P3  
CONTRACT:2018.23  
35 OF 58



**1**  
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**HOT WATER STORAGE TANK DIAGRAM**  
SCALE: NONE



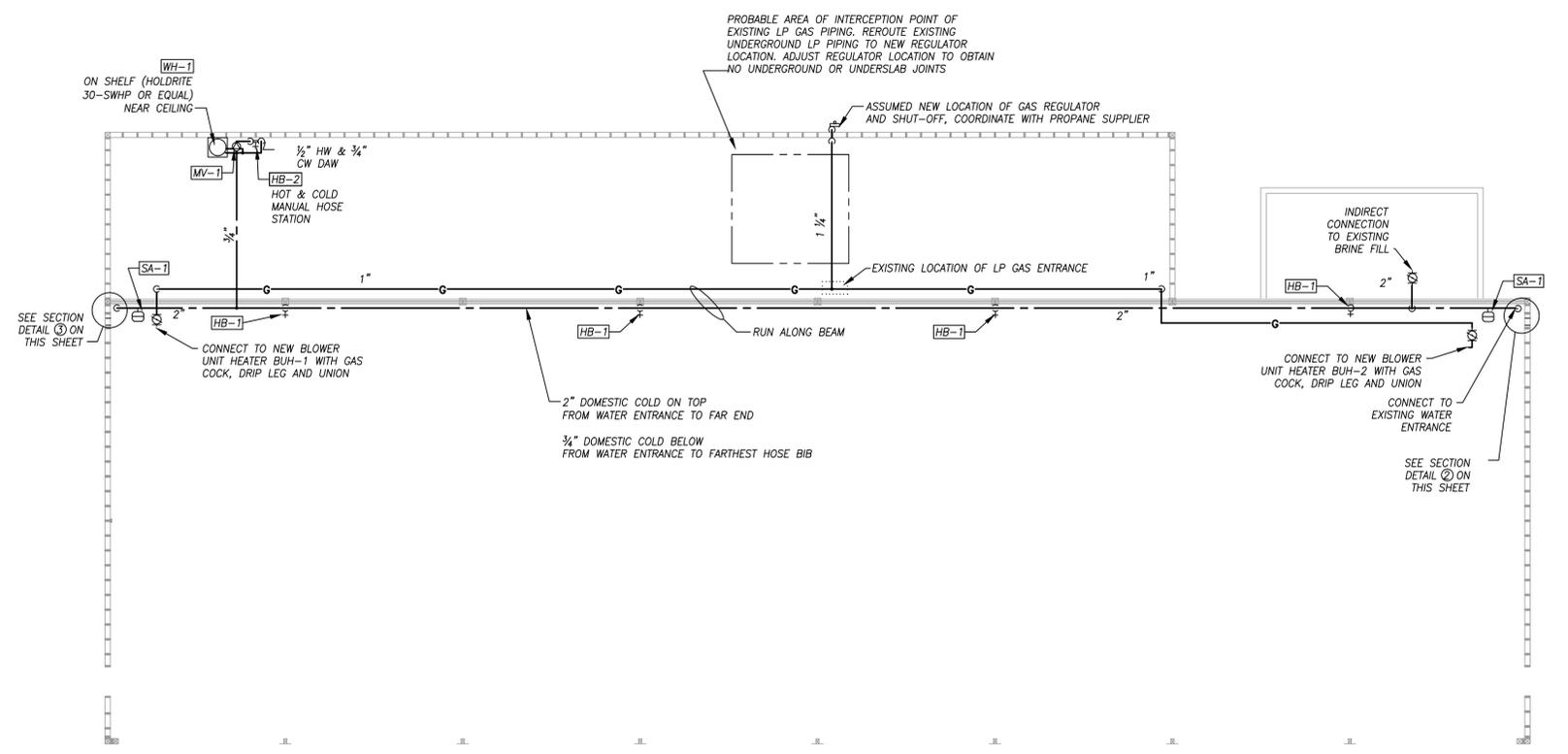
**2**  
TYP  
**SECTION AT BEAM RIGHT BAY**  
SCALE: NONE



**3**  
TYP  
**SECTION AT BEAM LEFT BAY**  
SCALE: NONE

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**CROSBY #3 PLAN VIEW**  
SCALE: 1/8" = 1'-0"

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HB-2	HOT AND COLD WATER MIXING STATION	3/4"	1/2"	3/4" GHT	
MV-1	MIXING VALVE	1/2"	1/2"	1/2"	
SA-1	SHOCK ABSORBER	1/2" OR 3/4"	-	-	P.D.I. A

**WATER HEATER SCHEDULE**

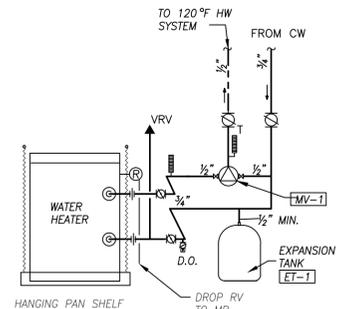
TAG	ITEM	GAL	WATTS	VOLTS	PH	SPECIFICATION & REMARKS
WH-1	DOMESTIC HOT WATER	10	4500	240	1	A. O. SMITH EIC-10, ELEC. BY EC W/ HOLDRITE 30-SWHP WALL SHELF

**LEGEND**

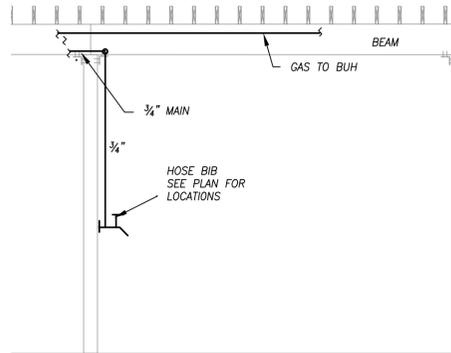
⊙	AT	GC	GENERAL CONTRACTOR	— G —	FUEL GAS PIPING ABOVE SLAB
A	AMPS,	NPT	NATIONAL PIPE THREAD	— — — —	DOMESTIC COLD WATER
AFF	ABOVE FINISHED FLOOR	OD	OUTSIDE DIAMETER	— A —	COMPRESSED AIR
BLV	BALL VALVE	PC	PLUMBING CONTRACTOR	⊘	BALL VALVE
CA	COMPRESSED AIR	RAW	RISE AT WALL	⊕	VERTICAL BALL VALVE
COORD	COORDINATION	TBD	TO BE DETERMINED	○	LINE UP TO FLOOR ABOVE
CTE	CONNECT TO EXISTING	TYP	TYPICAL	⊖	DROP/RISE IN LINE
DAW	DROP AT WALL	UAW	UP AT WALL	⊕	TEE -DROP
DAC	DROP ALONG COLUMN	VIF	VERIFY IN FIELD		
EQ	EQUAL	W/	WITH		
G	GAS (FUEL)	WC	WATER COLUMN		



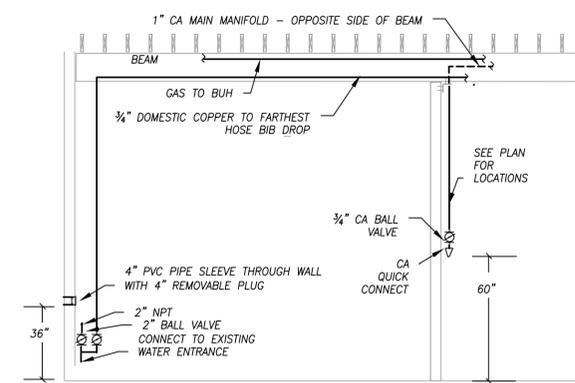
Scale:		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909		 <b>THE GOLD STAR MEMORIAL HIGHWAY</b>		MAINTENANCE GARAGE EXTENSIONS CROSBY #3 PLUMBING PLAN, NOTES AND SCHEDULES																											
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision							By	Date													CONSULTANT PROJECT MANAGER: KFM		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>EJP 11/18</td> <td>Checked</td> <td>KFM 11/18</td> </tr> <tr> <td>Drawn</td> <td>EJP 11/18</td> <td>In Charge of</td> <td>EJP 11/18</td> </tr> </tbody> </table>		By	Date	By	Date	Designed	EJP 11/18	Checked	KFM 11/18	Drawn	EJP 11/18
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**1**  
TYP  
**HOT WATER STORAGE TANK DIAGRAM**  
SCALE: NONE



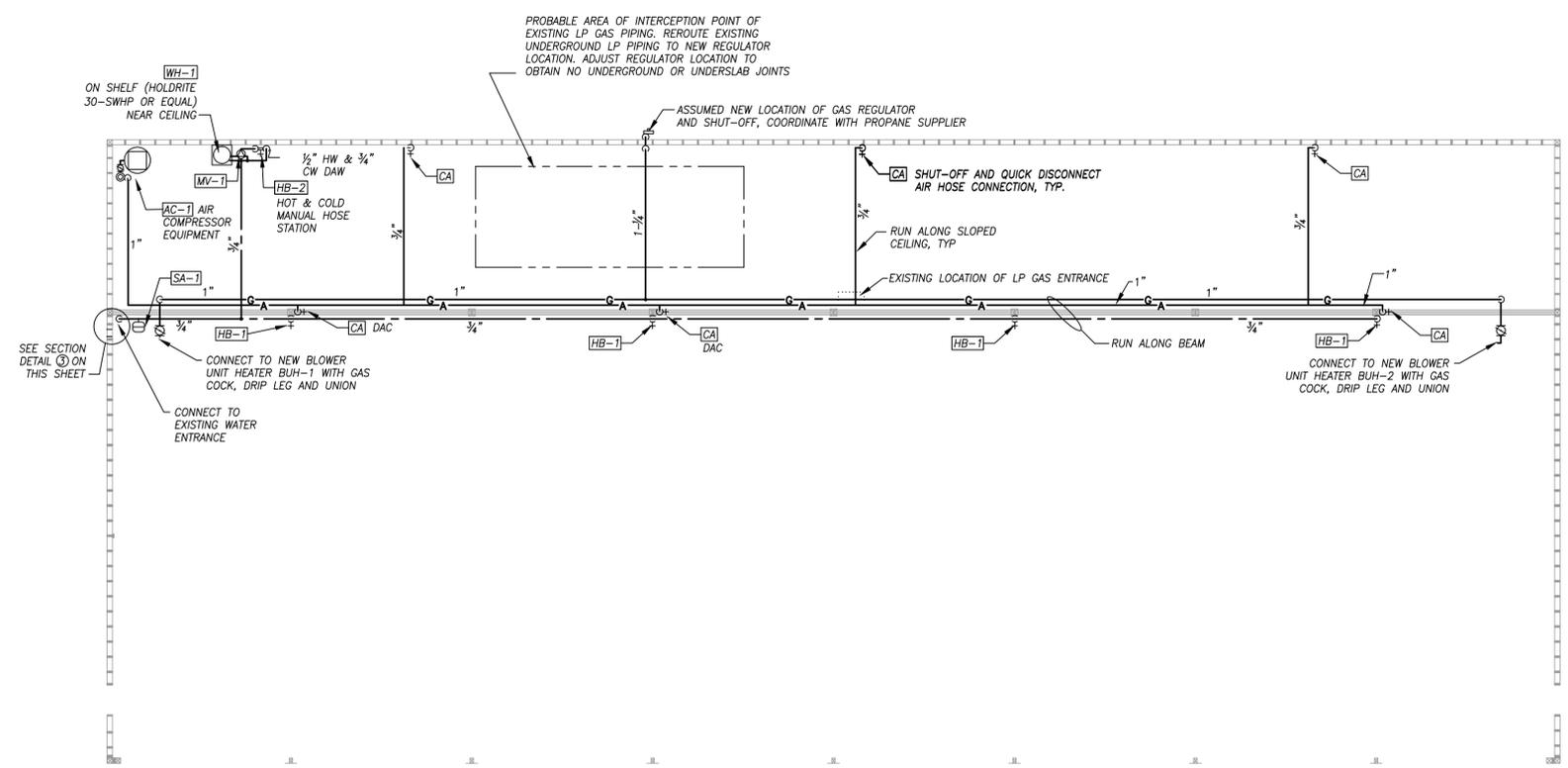
**2**  
TYP  
**SECTION AT BEAM RIGHT BAY**  
SCALE: NONE



**3**  
TYP  
**SECTION AT BEAM LEFT BAY**  
SCALE: NONE

**DEMOLITION NOTES**

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  - Air compressor piping and accessories



**GRAY PLAN VIEW**  
SCALE: 1/8" = 1'-0"

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HB-1	HOSE BIB W/ VB	3/4"	-	3/4" GHT	
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MV-1	MIXING VALVE	1/2"	1/2"	1/2"	
SA-1	SHOCK ABSORBER	1/2 OR 3/4"	-	-	P.D.I. A

**WATER HEATER SCHEDULE**

TAG	ITEM	GAL	WATTS	VOLTS	PH	SPECIFICATION & REMARKS
WH-1	DOMESTIC HOT WATER	10	4500	240	1	A. O. SMITH EJC-10, ELEC. BY EC W/ HOLDRITE 30-SWHP WALL SHELF

**AIR COMPRESSOR SCHEDULE**

TAG	ITEM	GAL	HP	VOLTS	PH	SPECIFICATION & REMARKS
AC-1	AIR COMPRESSOR STATIONARY	80	7.5	240	1	INGERSOLL RAND, VERTICAL TANK MOUNTED, MODEL 2475N7.5

**LEGEND**

⊙	AT	GC	GENERAL CONTRACTOR	— G —	FUEL GAS PIPING ABOVE SLAB
A	AMPS,	NPT	NATIONAL PIPE THREAD	— — —	DOMESTIC COLD WATER
AFF	ABOVE FINISHED FLOOR	OD	OUTSIDE DIAMETER	— A —	COMPRESSED AIR
BLV	BALL VALVE	PC	PLUMBING CONTRACTOR	⊙	BALL VALVE
CA	COMPRESSED AIR	RAW	RISE AT WALL	⊕	VERTICAL BALL VALVE
COORD	COORDINATION	TBD	TO BE DETERMINED	— O —	LINE UP TO FLOOR ABOVE
CTE	CONNECT TO EXISTING	TYP	TYPICAL	— ⊕ —	DROP/RISE IN LINE
DAW	DROP AT WALL	UAW	UP AT WALL	— ⊕ —	TEE -DROP
DAC	DROP ALONG COLUMN	VIF	VERIFY IN FIELD		
EQ	EQUAL	W/	WITH		
G	GAS (FUEL)	WC	WATER COLUMN		



Scale:

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**HNTB**

CONSULTANT PROJECT MANAGER: KFM

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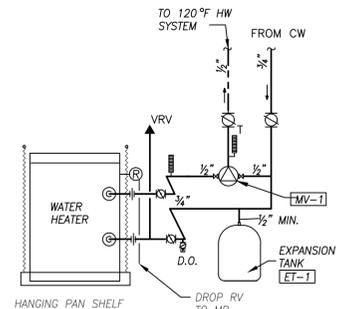
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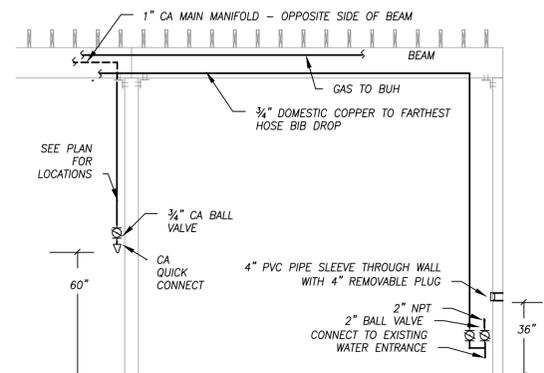
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
GRAY  
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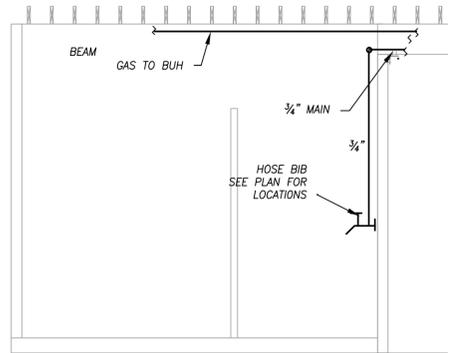
SHEET NUMBER:P5  
CONTRACT:2018.23  
37 OF 58



**1**  
TYP  
**HOT WATER STORAGE TANK DIAGRAM**  
SCALE: NONE



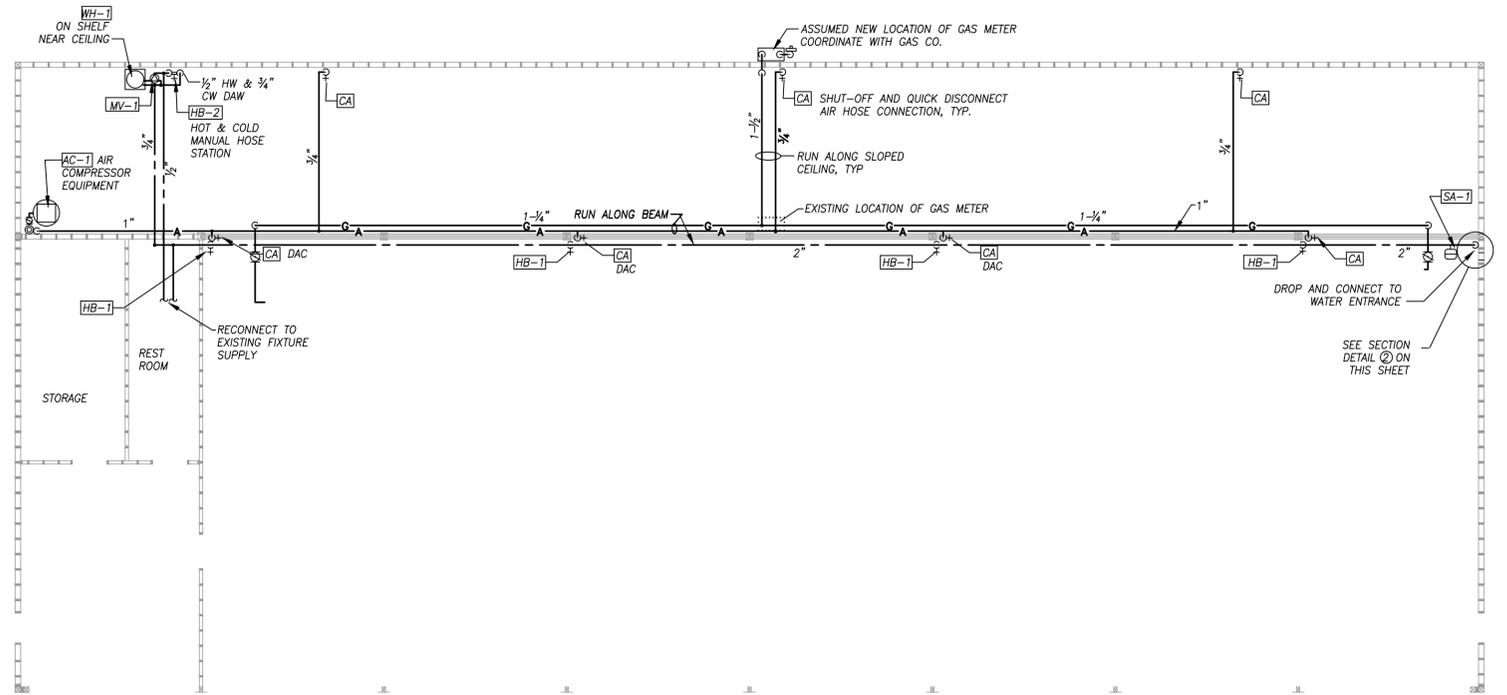
**2**  
TYP  
**SECTION AT BEAM RIGHT BAY**  
SCALE: NONE



**3**  
TYP  
**SECTION AT BEAM LEFT BAY**  
SCALE: NONE

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**KENNEBUNK #1 PLAN VIEW**  
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**WATER HEATER SCHEDULE**

TAG	ITEM	GAL	WATTS	VOLTS	PH	SPECIFICATION & REMARKS
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**LEGEND**

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DAW	DROP AT WALL	VIF	VERIFY IN FIELD	— ⊕ —	TEE -DROP
DAC	DROP ALONG COLUMN	W/	WITH		
EQ	EQUAL	WC	WATER COLUMN		
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Scale:

No.	Revision	By	Date

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**HNTB**

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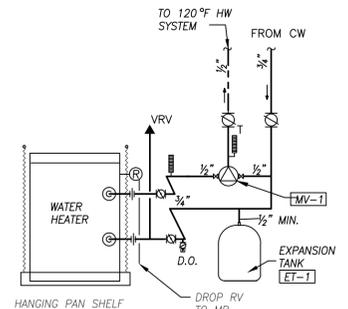
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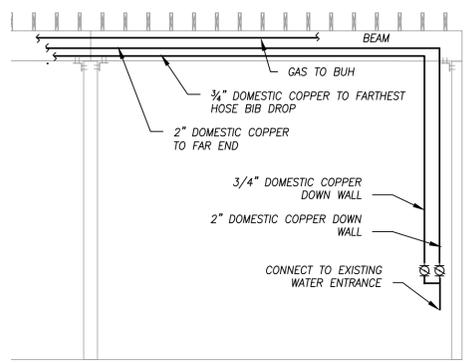
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
KENNEBUNK #1  
PLUMBING PLAN, NOTES AND SCHEDULES

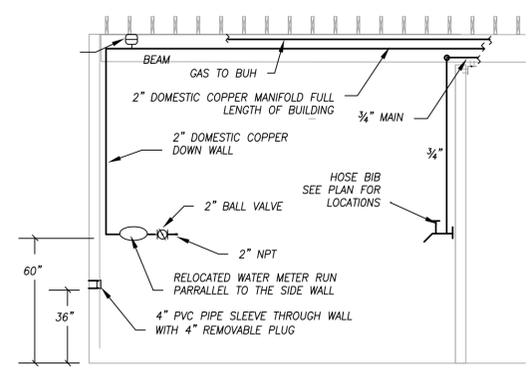
SHEET NUMBER: P6  
CONTRACT: 2018.23  
38 OF 58



**1**  
TYP  
**HOT WATER STORAGE TANK DIAGRAM**  
SCALE: NONE



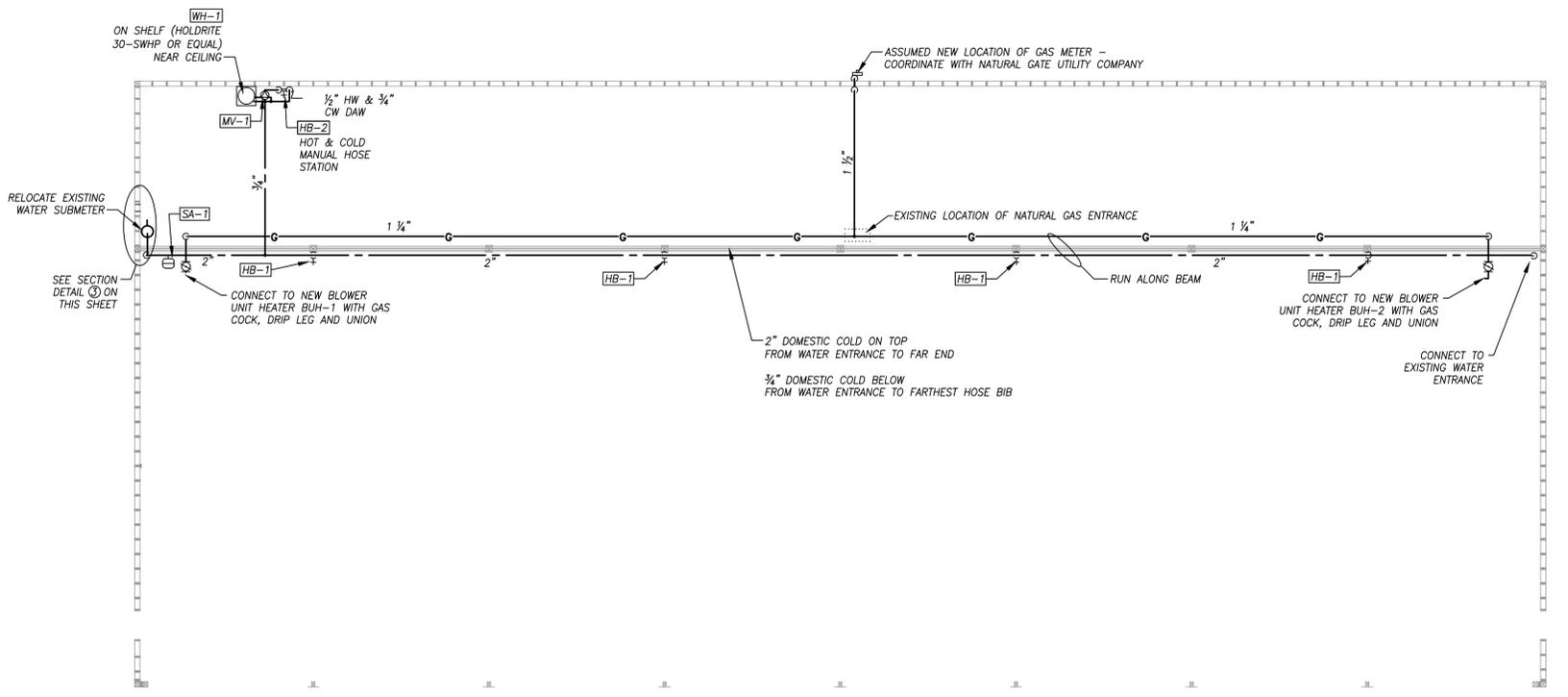
**2**  
TYP  
**SECTION AT BEAM RIGHT BAY**  
SCALE: NONE



**3**  
TYP  
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ET-1	EXPANSION TANK	1/2"	-	-	
HB-1	HOSE BIB W/ VB	3/4"	-	3/4" GHT	
HB-2	HOT AND COLD WATER MIXING STATION	3/4"	1/2"	3/4" GHT	
MV-1	MIXING VALVE	1/2"	1/2"	1/2"	P.D.I. A
SA-1	SHOCK ABSORBER	1/2 OR 3/4"	-	-	

**WATER HEATER SCHEDULE**

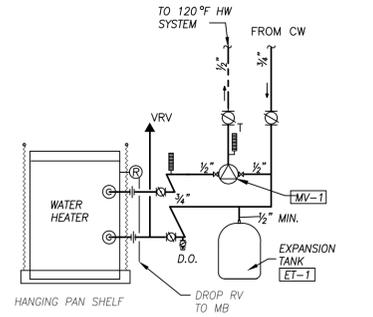
TAG	ITEM	GAL	WATTS	VOLTS	PH	SPECIFICATION & REMARKS
WH-1	DOMESTIC HOT WATER	10	4500	240	1	A. O. SMITH EIC-10, ELEC. BY EC W/ HOLDRITE 30-SWHP WALL SHELF

**LEGEND**

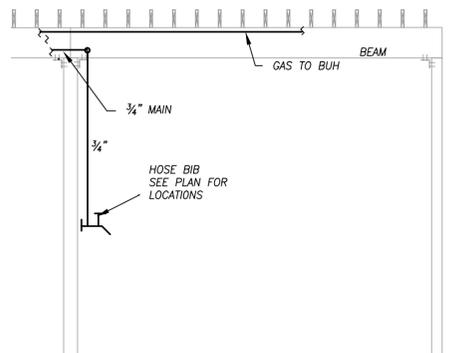
GC	GENERAL CONTRACTOR	G	FUEL GAS PIPING ABOVE SLAB
NPT	NATIONAL PIPE THREAD	- - -	DOMESTIC COLD WATER
OD	OUTSIDE DIAMETER	A	COMPRESSED AIR
PC	PLUMBING CONTRACTOR	○	BALL VALVE
RAW	RISE AT WALL	○	VERTICAL BALL VALVE
TBD	TO BE DETERMINED	○	LINE UP TO FLOOR ABOVE
TYP	TYPICAL	○	DROP/RISE IN LINE
UAW	UP AT WALL	○	TEE -DROP
VIF	VERIFY IN FIELD		
W/	WITH		
WC	WATER COLUMN		



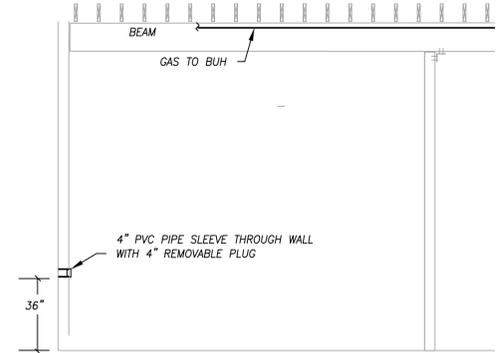
Scale:		Designed by:		<b>HNTB</b>		HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909		 <b>THE GOLD STAR MEMORIAL HIGHWAY</b>		MAINTENANCE GARAGE EXTENSIONS KENNEBUNK #2 PLUMBING PLAN, NOTES AND SCHEDULES													
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By	Date	By	Date																				
Designed	EJP 11/18	Checked	KFM 11/18																				
Drawn	EJP 11/18	In Charge of	EJP 11/18																				



**1**  
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**HOT WATER STORAGE TANK DIAGRAM**  
SCALE: NONE



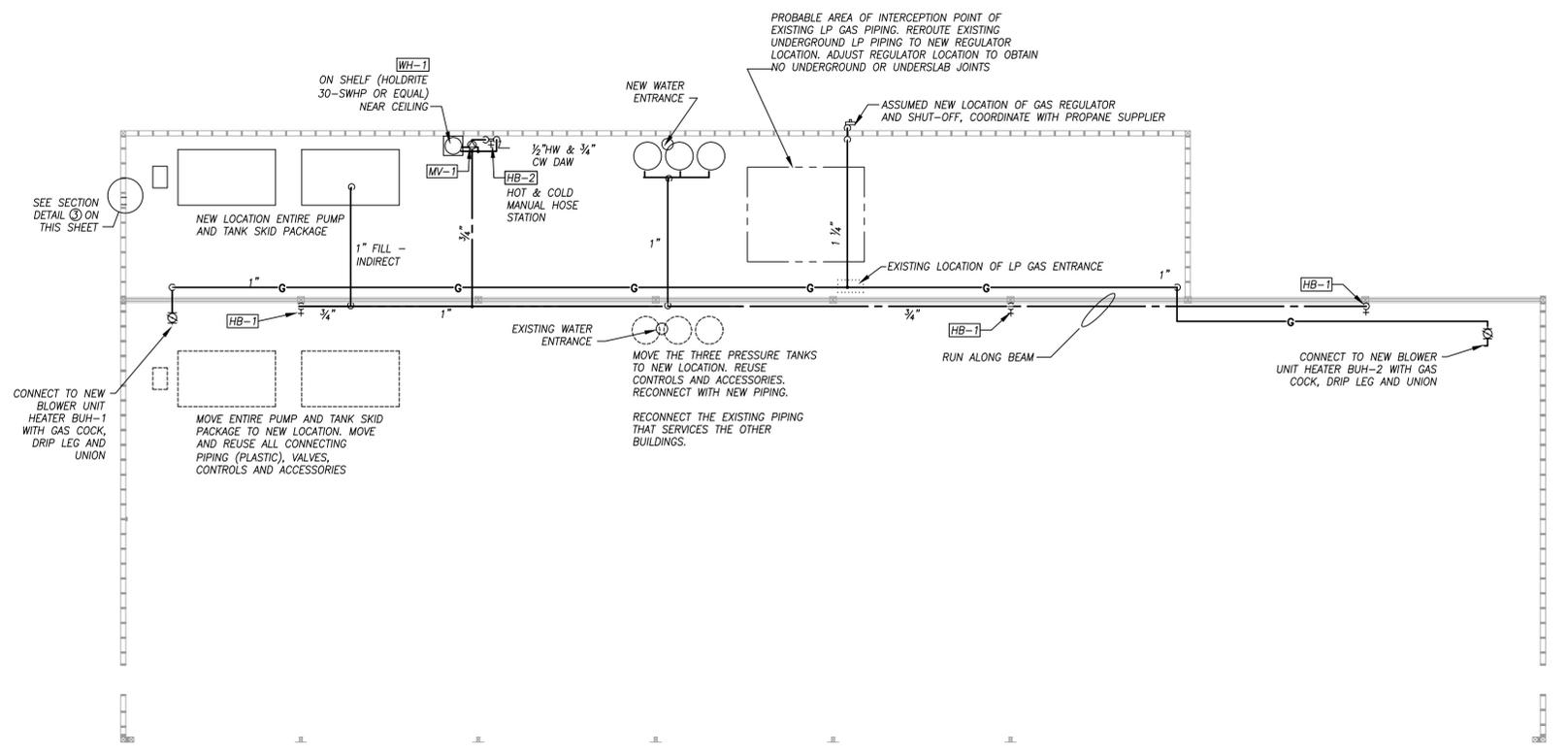
**2**  
TYP  
**SECTION AT BEAM RIGHT BAY**  
SCALE: NONE



**3**  
TYP  
**SECTION AT BEAM LEFT BAY**  
SCALE: NONE

**DEMOLITION NOTES**

- It is the Plumbing Contractor's responsibility to remove all existing plumbing and compressed air piping that is not being reused from the jobsite.
- Items to be removed include, but are not limited to:
  - Existing hot water heater including flues if existing
  - Existing gas piping and accessories
  - Existing domestic hot & cold water piping and accessories
  - Air compressor piping and accessories



**LITCHFIELD PLAN VIEW**  
SCALE: 1/8" = 1'-0"

**GENERAL NOTES**

- All work shall be in accordance with the Maine State (Uniform) Plumbing Code, local codes and ordinances, National Fire Code (NFPA), or these plans or specifications, whichever is more strict.
- All drawings are schematic only, and are intended to indicate the intent, extent, and general arrangement of work. They are not meant to show every fitting, change of direction or every situation. Verify locations in the field. Work indicated shall be furnished complete to perform the function intended.
- Carefully coordinate the space requirements and location of piping with the other trade contractors.
- This contractor shall make all final plumbing connections to equipment/fixtures provided by other contractors.
- No structural members shall be cut without approval of the Structural Engineer.
- All plumbing shall be supported from the building structure. Hangers longer than 12" will be seismically braced if required by the International Building Code.
- ANY pipe penetrations through a fire rated wall or floor shall have a UL rated fire stop system rated to match the rating of the wall assembly, as per the NFPA.
- All above ground domestic hot water piping shall be insulated unless otherwise specified.
- Run all water and drain piping on warm side of building insulation. No lines shall be run in exterior walls, unless directly indicated.
- All Domestic water piping shall be type "K" or "L" copper, type "M" is prohibited.
- All Compressed Air piping to be schedule 40 Black Iron

**WATER SPEC. SCHEDULE**

TAG	ITEM	CW	HW	OUTLET	REMARKS
ET-1	EXPANSION TANK	1/2"	-	-	
HB-1	HOSE BIB W/ VB	3/4"	-	3/4" GHT	
HB-2	HOT AND COLD WATER MIXING STATION	3/4"	1/2"	3/4" GHT	
MV-1	MIXING VALVE	1/2"	1/2"	1/2"	
SA-1	SHOCK ABSORBER	1/2 OR 3/4"	-	-	P.D.I. A

**WATER HEATER SCHEDULE**

TAG	ITEM	GAL	WATTS	VOLTS	PH	SPECIFICATION & REMARKS
WH-1	DOMESTIC HOT WATER	10	4500	240	1	A. O. SMITH EJC-10, ELEC. BY EC W/ HOLDRITE 30-SWHP WALL SHELF

**LEGEND**

⊙	AT	GC	GENERAL CONTRACTOR	— G —	FUEL GAS PIPING ABOVE SLAB
A	AMPS,	NPT	NATIONAL PIPE THREAD	— — — — —	DOMESTIC COLD WATER
AFF	ABOVE FINISHED FLOOR	OD	OUTSIDE DIAMETER	— A —	COMPRESSED AIR
BLV	BALL VALVE	PC	PLUMBING CONTRACTOR	⊙	BALL VALVE
CA	COMPRESSED AIR	RAW	RISE AT WALL	⊕	VERTICAL BALL VALVE
COORD	COORDINATION	TBD	TO BE DETERMINED	— ○ —	LINE UP TO FLOOR ABOVE
CTE	CONNECT TO EXISTING	TYP	TYPICAL	— ○ —	DROP/RISE IN LINE
DAW	DROP AT WALL	VIF	VERIFY IN FIELD	— ○ —	TEE -DROP
DAC	DROP ALONG COLUMN	W/	WITH		
EQ	EQUAL	WC	WATER COLUMN		



Scale:

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: KFM

By	Date	By	Date

Designed \_\_\_\_\_ Checked \_\_\_\_\_  
 Drawn \_\_\_\_\_ In Charge of \_\_\_\_\_

HNTB CORPORATION  
 340 County Road, Suite 6-C  
 Westbrook, ME 04092  
 TEL (207) 774-5155  
 FAX (207) 228-0909

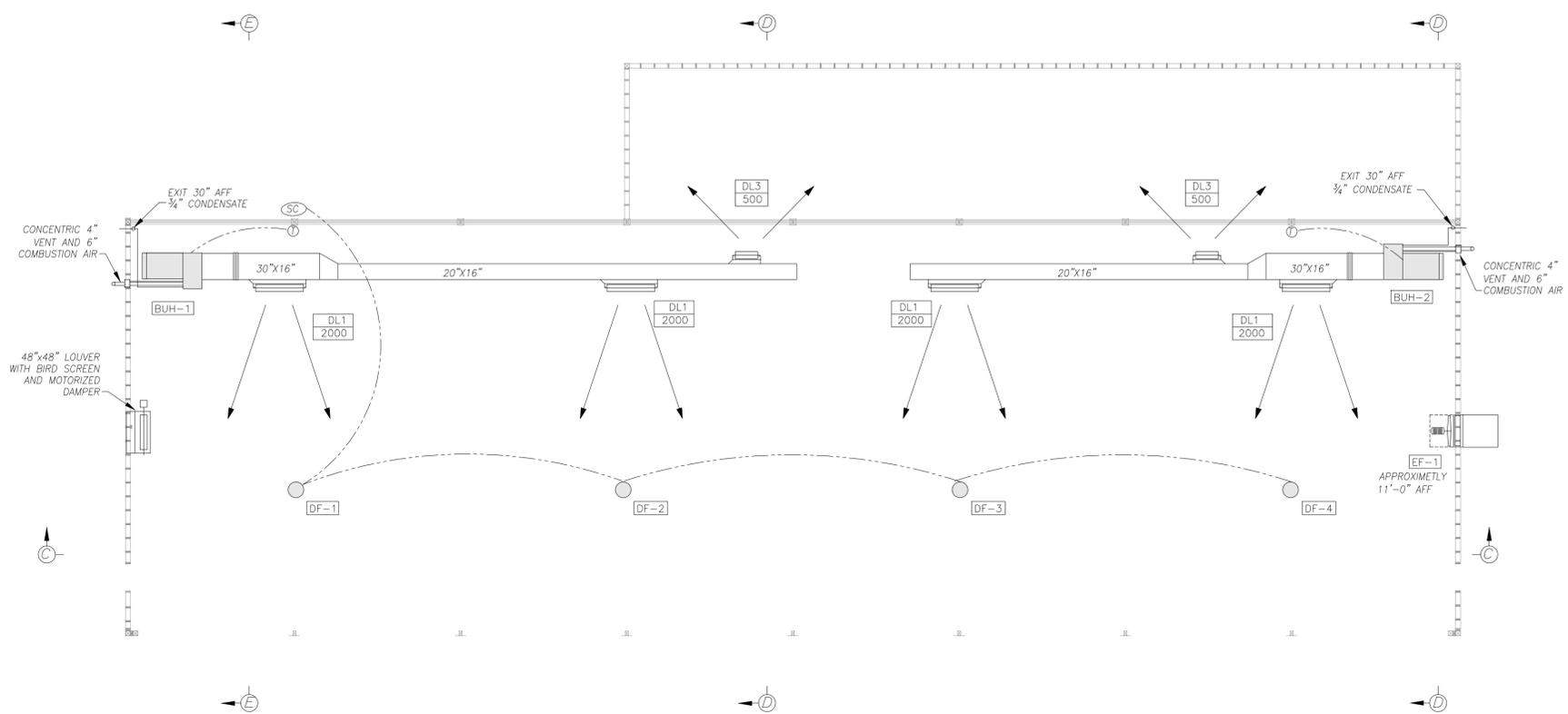
**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

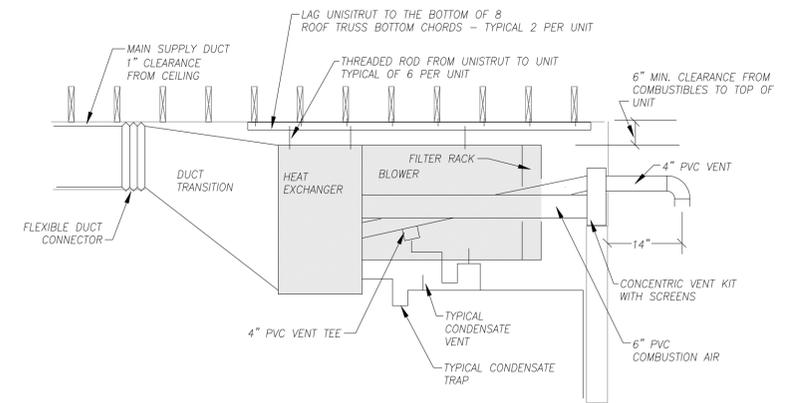
MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
 LITCHFIELD  
 PLUMBING PLAN, NOTES AND SCHEDULES

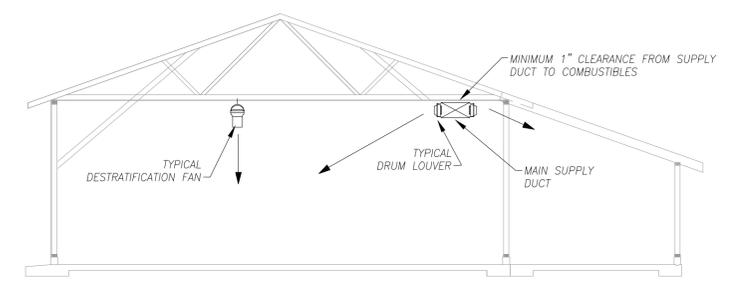
SHEET NUMBER:P8  
 CONTRACT:2018.23  
 40 OF 58



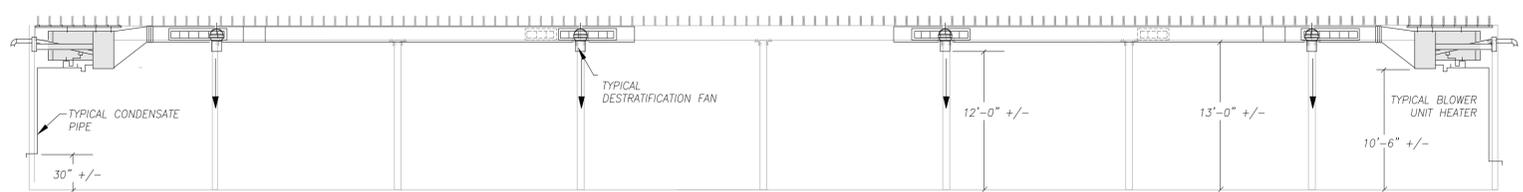
AUBURN PLAN VIEW  
SCALE: 1/8" = 1'-0"



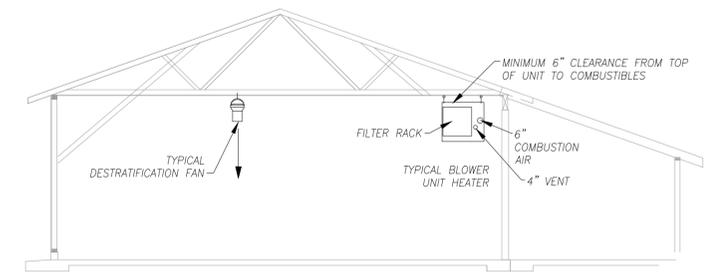
SECTION THROUGH BLOWER UNIT HEATER  
SCALE: 1/2" = 1'-0"



SECTION E-E  
SCALE: 1/8" = 1'-0"



SECTION C-C  
SCALE: 1/8" = 1'-0"



SECTION D-D  
SCALE: 1/8" = 1'-0"



Scale:		Designed by:	
No.	Revision	By	Date

<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: KFM					
	By	Date		By	Date
	KFM	11/18	Checked	KFM	11/18
	REM	11/18	In Charge of	REM	11/18

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
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FAX (207) 228-0909



THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
AUBURN  
MECHANICAL PLAN VIEW

## GENERAL NOTES

- All systems are to be to meet the following Codes and Standards.
  - ASHRAE 90.1 2007 – Energy Standard for Commercial Buildings.
  - ASHRAE 60.1 2007 – Standard for Indoor Air Quality in Commercial Buildings.
  - 2009 IECC – International Energy Conservation Code.
  - NFPA – National Fire Protection Association Standards.
- Do not cut any structural members without pre-approval of structural engineer.

## SHEETMETAL NOTES

- All ductwork to be fabricated and installed per SMACNA Low Pressure Ductwork Standards.
- Ductwork is shown diagrammatically and does not indicate all the offsets, rises and drops that will be required.
- All ductwork is within the Building Thermal Envelope and will not require insulation.

## VENTING, COMBUSTION AIR AND CONDENSATE NOTES

- Piping is shown diagrammatically and does not indicate all the offsets, rises and drops that will be required.
- All condensate piping to be Schedule 40 PVC.
- All venting and combustion air piping to be Schedule 40 PVC.
- All venting, combustion air and condensate piping to be installed per manufacturers recommendations and requirements for horizontal venting.

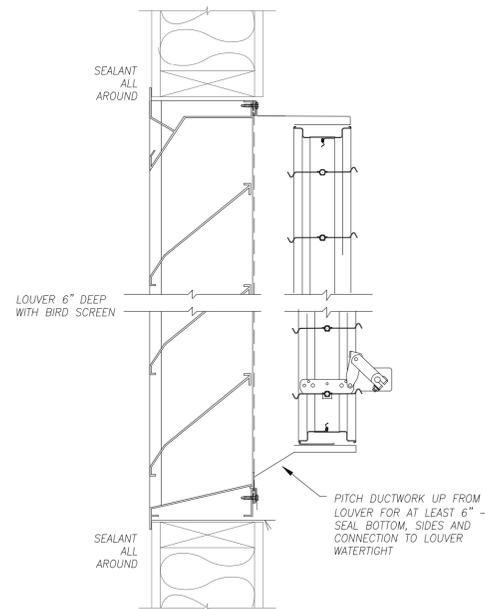
## CONTROL NOTES

- It will be the Mechanical Contractor's responsibility to provide and install all controls and all control wiring.
- All control wiring that is run exposed shall be in electrical conduit provided and installed by the mechanical contractor (or his ATC subcontractor)..
- Blower Unit Heaters (BUH) to have 24v heating only thermostats.
- Control for the De-stratification Fans (DF) to be provided by the Mechanical Contractor including Potentiometer Speed Control, control wiring and conduit.

## DEMOLITION NOTES

- It will be the mechanical contractor's to remove from the jobsite all existing mechanical related items that will no longer be in service.
- Items to be removed include (but are not limited to):
  - Air Handler / Warm Air Furnace
  - All ductwork, registers and grilles associated with the Air Handler / Warm air furnace.
  - Furnace breeching from furnace to masonry chimney.
  - Thermostats and related control wiring.
- All removed items to be disposed of per EPA Standards.

LEGEND	
	FLEXIBLE CONNECTOR
	DRUM LOUVER DIFFUSER
	DOUBLE DEFLECTION DIFFUSER
	MANUAL DAMPER W/LOCKING QUADRANT
	SIDE TAKE-OFF WITH VOLUME DAMPER
	THERMOSTAT
	SPEED CONTROL



EXTERIOR LOUVER DETAIL  
NO SCALE

## AUBURN

### DESTRATIFICATION & EXHAUST FAN SCHEDULE

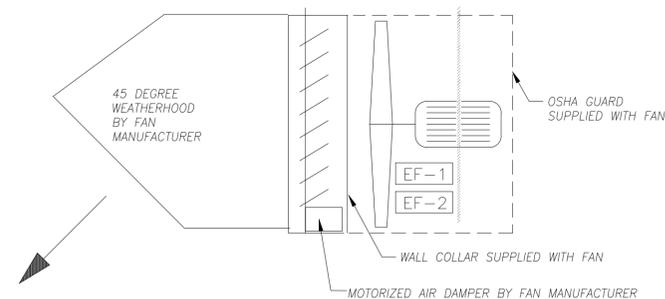
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				POWER	FLA	HP			
DF-1	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	ARIUS POT-1 POTENTIOMETER SPEED CONTROL FOR MULTIPLE EC MOTORS
DF-2	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	
DF-3	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	
DF-4	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	
EF-1	GREENHECK S2-30-610b10	SIDEWALL	8,600 @ 0.20" SP	115/60/1		1.0	150 LBS	WITH WALL COLLAR, 115V MOTORIZED DAMPER, MOTOR SIDE GUARD AND EXTERIOR 45 DEG. WEATHER HOOD	WALL STARTER POWERING FAN AND LOUVER

### BLOWER UNIT HEATER SCHEDULE

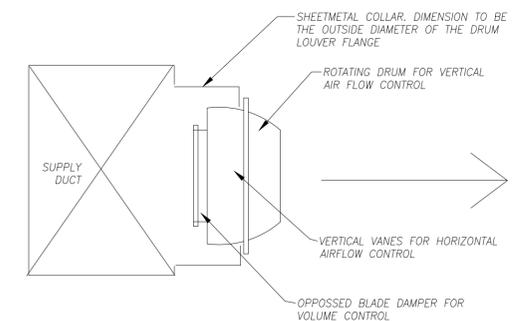
TAG	DESIGN MANUFACTURER & MODEL	BTUH INPUT	BTUH OUTPUT	AFUE	FUEL	CFM	E.S.P.	MOTOR HP	POWER	WEIGHT	REMARKS
BUH-1	MODINE EFFINTY BTC310	310,000	257,000	93 %	LP GAS	4,500	0.50"	2.0	230/60/1	395 LBS	CONDENSING TYPE – SEALED COMBUSTION WITH FACTORY BLOWER ENCLOSURE, FILTER RACK, CONCENTRIC HORIZONTAL VENT KIT, AND 24V CONTROL CIRCUIT
BUH-2	MODINE EFFINTY BTC310	310,000	257,000	93 %	LP GAS	4,500	0.50"	2.0	230/60/1	395 LBS	

### AIR TERMINAL SCHEDULE

TAG	DESIGN MANUFACTURER & MODEL	SIZE	MAX NC	MAX SP	REMARKS
DL1	PRICE HCD 12/48	48"x12"	30	.07	HIGH CAPACITY DRUM LOUVER DIFFUSER WITH VERTICAL VANES AND OPPOSED BLADE DAMPER
DL3	PRICE HCD 6/24	24"x6"	30	.07	HIGH CAPACITY DRUM LOUVER DIFFUSER WITH VERTICAL VANES AND OPPOSED BLADE DAMPER



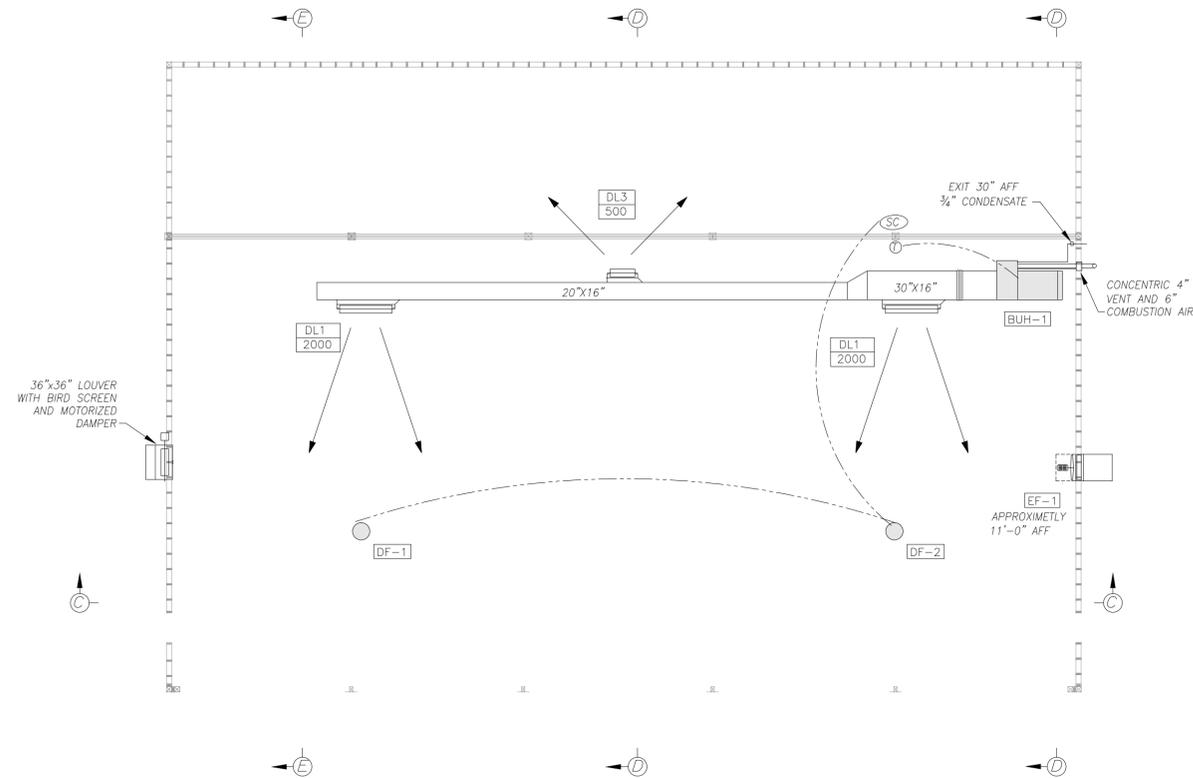
EXHAUST FAN DETAIL SECTION  
NO SCALE



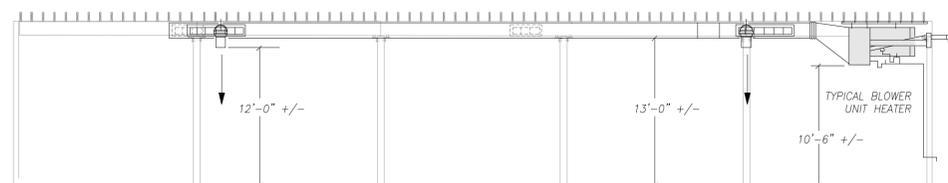
DRUM LOUVER DETAIL  
NO SCALE



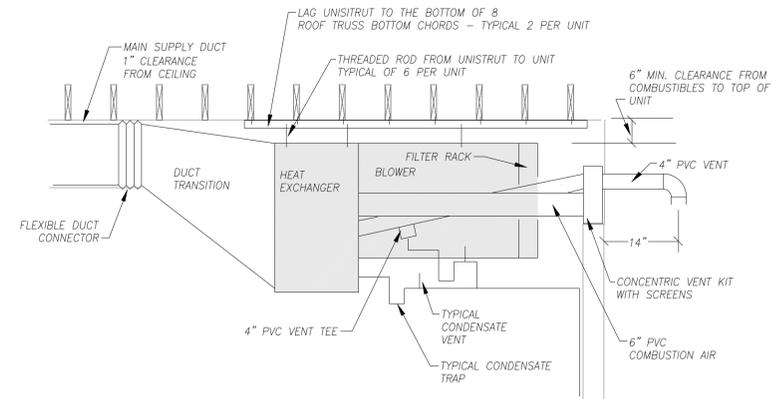
Scale:		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909				THE GOLD STAR MEMORIAL HIGHWAY		MAINTENANCE GARAGE EXTENSIONS AUBURN SCHEDULES, NOTES & DETAILS					
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By	Date	Checked	By	Date													
KFM	11/18		KFM	11/18													



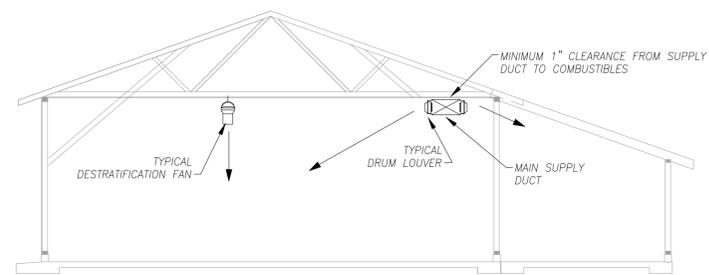
CROSBY #1 PLAN VIEW  
SCALE: 1/8" = 1'-0"



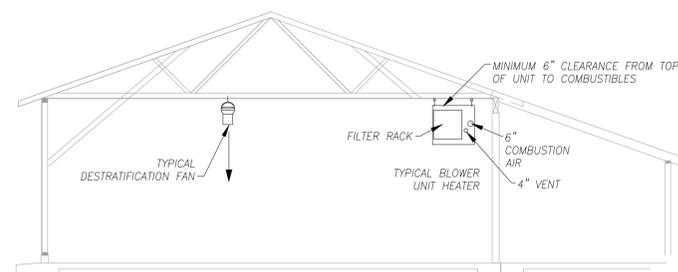
SECTION C-C  
SCALE: 1/8" = 1'-0"



SECTION THROUGH BLOWER UNIT HEATER  
SCALE: 1/2" = 1'-0"



SECTION E-E  
SCALE: 1/8" = 1'-0"



SECTION D-D  
SCALE: 1/8" = 1'-0"



Scale:

Designed by:



HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
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THE GOLD STAR  
MEMORIAL HIGHWAY

MAINTENANCE GARAGE EXTENSIONS  
CROSBY #1  
MECHANICAL PLAN VIEW

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: KFM

	By	Date		By	Date
Designed	KFM	11/18	Checked	KFM	11/18
Drawn	REM	11/18	In Charge of	REM	11/18

MTA PROJECT MANAGER: BRIAN TADDEO, PE

CONTRACT: 2018.23

SHEET NUMBER: M3

43 OF 58

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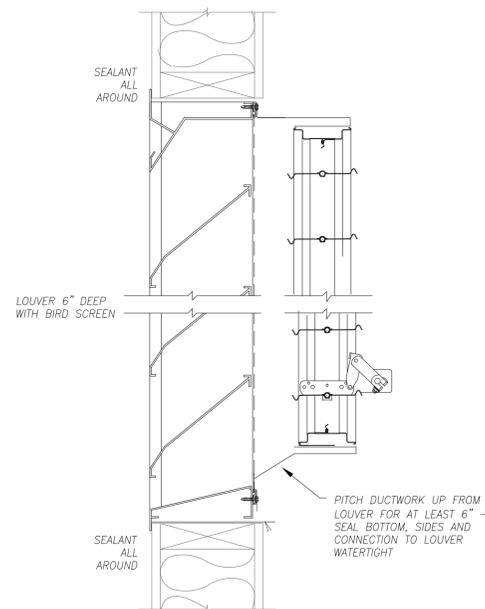
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	SIDE TAKE-OFF WITH VOLUME DAMPER
	THERMOSTAT
	SPEED CONTROL



EXTERIOR LOUVER DETAIL  
NO SCALE

CROSBY #1

## DESTRATIFICATION & EXHAUST FAN SCHEDULE

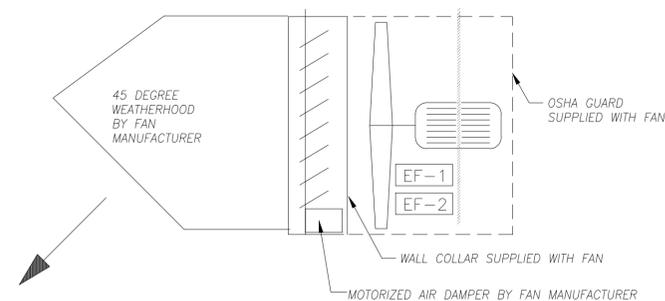
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				POWER	FLA	HP			
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EF-1	GREENHECK S2-24-630C5	SIDEWALL	4,800 @ 0.20" SP	115/60/1		0.5	100 LBS	WITH WALL COLLAR, 115V MOTORIZED DAMPER, MOTOR SIDE GUARD AND EXTERIOR 45 DEG. WEATHER HOOD	WALL STARTER POWERING FAN AND LOUVER

## BLOWER UNIT HEATER SCHEDULE

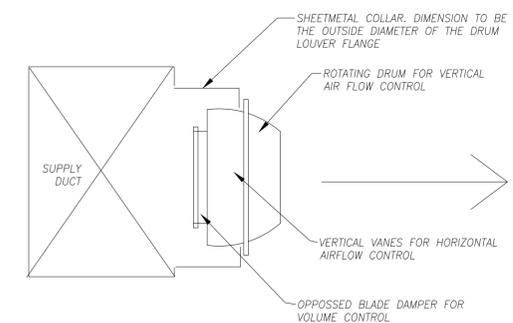
TAG	DESIGN MANUFACTURER & MODEL	BTUH INPUT	BTUH OUTPUT	AFUE	FUEL	CFM	E.S.P.	MOTOR HP	POWER	WEIGHT	REMARKS
BUH-1	MODINE EFFINTY BTC310	310,000	257,000	93 %	LP GAS	4,500	0.50"	2.0	230/60/1	395 LBS	CONDENSING TYPE – SEALED COMBUSTION WITH FACTORY BLOWER ENCLOSURE, FILTER RACK, CONCENTRIC HORIZONTAL VENT KIT, AND 24V CONTROL CIRCUIT

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DL3	PRICE HCD 6/24	24"x6"	30	.07	HIGH CAPACITY DRUM LOUVER DIFFUSER WITH VERTICAL VANES AND OPPOSED BLADE DAMPER



EXHAUST FAN DETAIL SECTION  
NO SCALE



DRUM LOUVER DETAIL  
NO SCALE



Scale:

Designed by:

**HNTB**

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909



THE GOLD STAR  
MEMORIAL HIGHWAY

MAINTENANCE GARAGE EXTENSIONS  
CROSBY #1  
SCHEDULES, NOTES & DETAILS

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: KFM

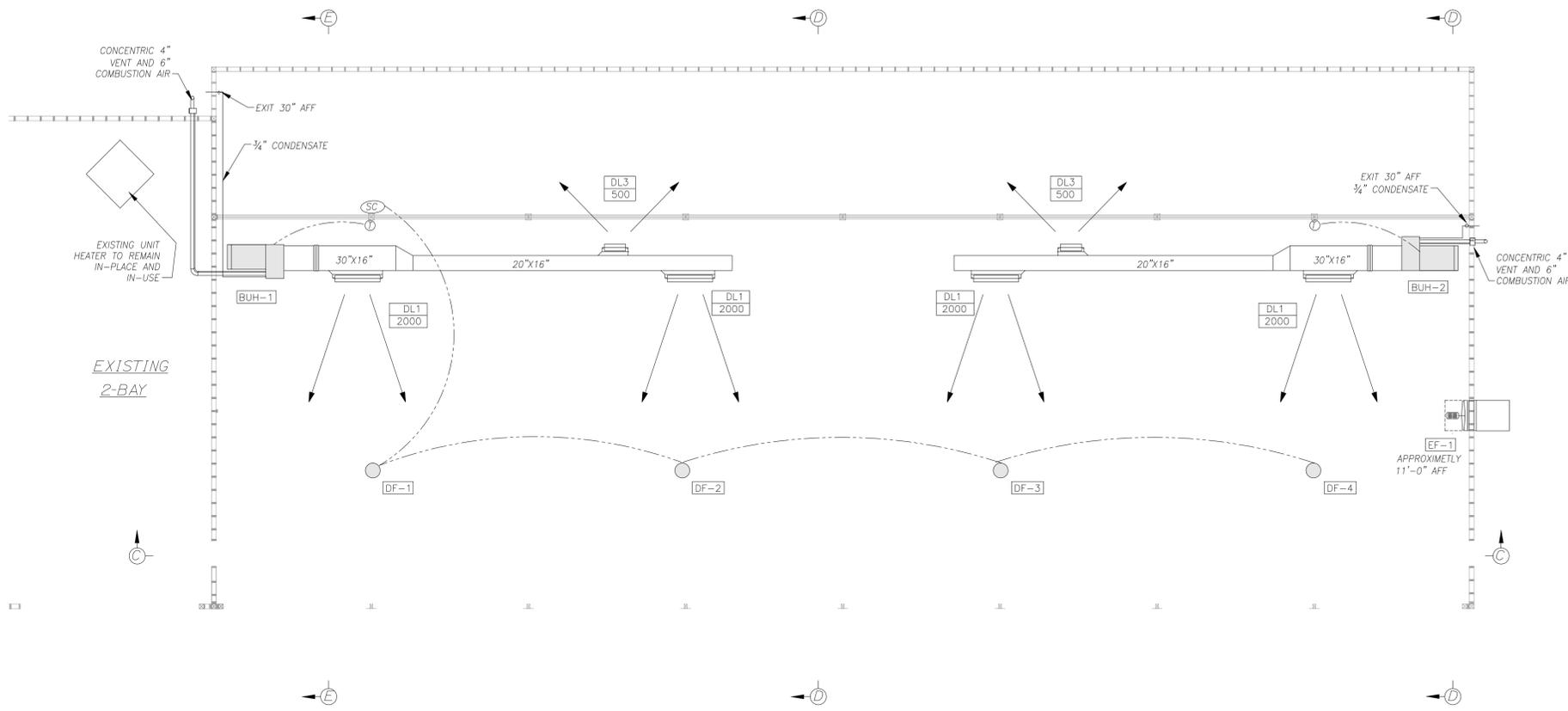
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Designed	KFM	11/18	Checked	KFM	11/18
Drawn	REM	11/18	In Charge of	REM	11/18

MTA PROJECT MANAGER: BRIAN TADDEO, PE

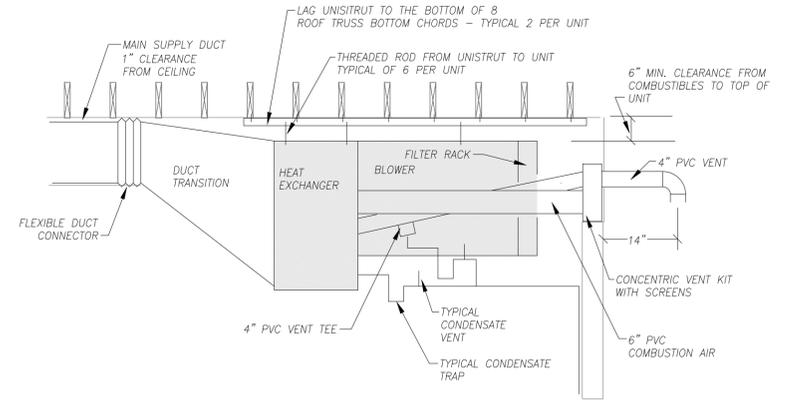
CONTRACT:2018.23

SHEET NUMBER: M4

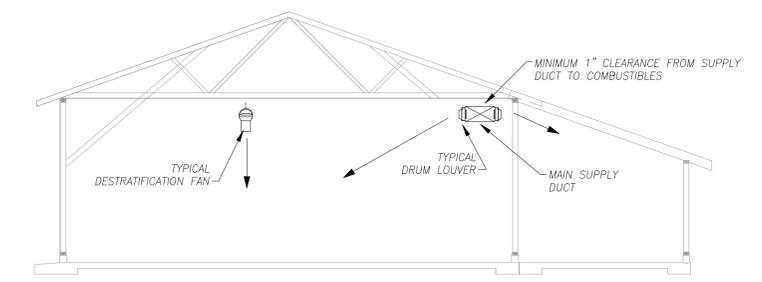
44 OF 58



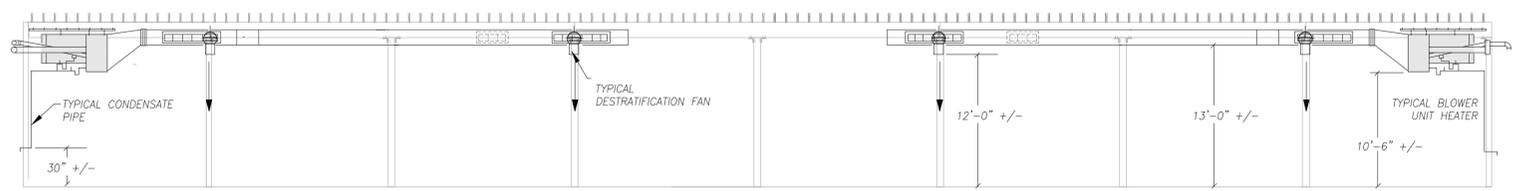
CROSBY #2 PLAN VIEW  
SCALE: 1/8" = 1'-0"



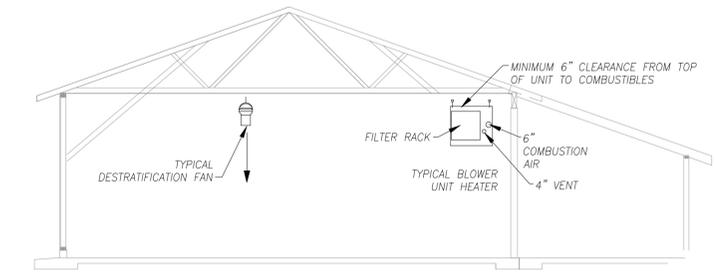
SECTION THROUGH BLOWER UNIT HEATER  
SCALE: 1/2" = 1'-0"



SECTION E-E  
SCALE: 1/8" = 1'-0"



SECTION C-C  
SCALE: 1/8" = 1'-0"



SECTION D-D  
SCALE: 1/8" = 1'-0"



Scale:

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: KFM

By	Date	Checked	By	Date
KFM	11/18		KFM	11/18
REM	11/18	In Charge of	REM	11/18

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909



THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
CROSBY #2  
MECHANICAL PLAN VIEW

## GENERAL NOTES

- All systems are to be to meet the following Codes and Standards.
  - ASHRAE 90.1 2007 - Energy Standard for Commercial Buildings.
  - ASHRAE 60.1 2007 - Standard for Indoor Air Quality in Commercial Buildings.
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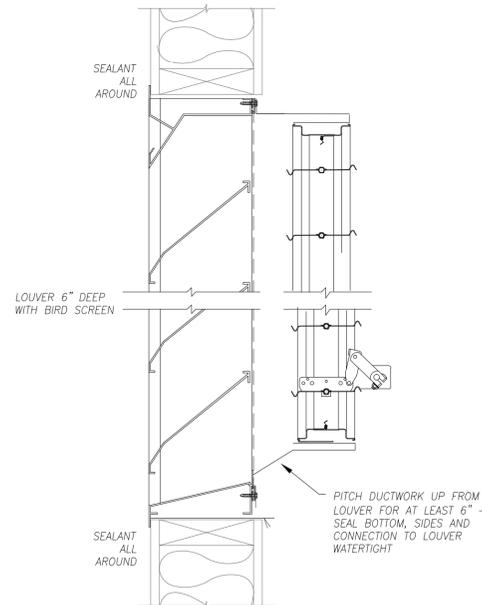
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- Blower Unit Heaters (BUH) to have 24v heating only thermostats.
- Control for the Destratification Fans (DF) to be provided by the Mechanical Contractor including Potentiometer Speed Control, control wiring and conduit.

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  - Air Handler / Warm Air Furnace
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LEGEND	
	FLEXIBLE CONNECTOR
	DRUM LOUVER DIFFUSER
	DOUBLE DEFLECTION DIFFUSER
	MANUAL DAMPER W/LOCKING QUADRANT
	SIDE TAKE-OFF WITH VOLUME DAMPER
	THERMOSTAT
	SPEED CONTROL



EXTERIOR LOUVER DETAIL  
NO SCALE

CROSBY #2

## DESTRATIFICATION & EXHAUST FAN SCHEDULE

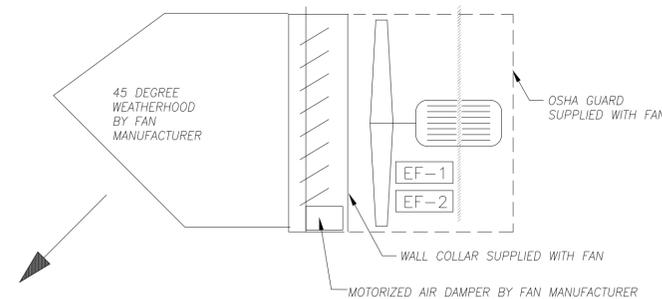
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				POWER	FLA	HP			
DF-1	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR - GRAY COLOR	AIRIUS POT-1 POTENTIOMETER SPEED CONTROL FOR MULTIPLE EC MOTORS
DF-2	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR - GRAY COLOR	
DF-3	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR - GRAY COLOR	
DF-4	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR - GRAY COLOR	
EF-1	GREENHECK S2-30-610b10	SIDEWALL	8,600 @ 0.20" SP	115/60/1		1.0	150 LBS	WITH WALL COLLAR, 115V MOTORIZED DAMPER, MOTOR SIDE GUARD AND EXTERIOR 45 DEG. WEATHER HOOD	WALL STARTER POWERING FAN AND LOUVER

## BLOWER UNIT HEATER SCHEDULE

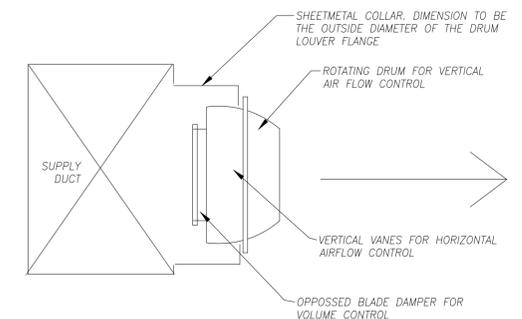
TAG	DESIGN MANUFACTURER & MODEL	BTUH INPUT	BTUH OUTPUT	AFUE	FUEL	CFM	E.S.P.	MOTOR HP	POWER	WEIGHT	REMARKS
BUH-1	MODINE EFFINTY BTC310	310,000	257,000	93 %	LP GAS	4,500	0.50"	2.0	230/60/1	395 LBS	CONDENSING TYPE - SEALED COMBUSTION WITH FACTORY BLOWER ENCLOSURE, FILTER RACK, CONCENTRIC HORIZONTAL VENT KIT, AND 24V CONTROL CIRCUIT
BUH-2	MODINE EFFINTY BTC310	310,000	257,000	93 %	LP GAS	4,500	0.50"	2.0	230/60/1	395 LBS	

## AIR TERMINAL SCHEDULE

TAG	DESIGN MANUFACTURER & MODEL	SIZE	MAX NC	MAX SP	REMARKS
DL1	PRICE HCD 12/48	48"x12"	30	.07	HIGH CAPACITY DRUM LOUVER DIFFUSER WITH VERTICAL VANES AND OPPOSED BLADE DAMPER
DL3	PRICE HCD 6/24	24"x6"	30	.07	HIGH CAPACITY DRUM LOUVER DIFFUSER WITH VERTICAL VANES AND OPPOSED BLADE DAMPER



EXHAUST FAN DETAIL SECTION  
NO SCALE



DRUM LOUVER DETAIL  
NO SCALE



Scale:

Designed by:

**HNTB**

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909



THE GOLD STAR  
MEMORIAL HIGHWAY

MAINTENANCE GARAGE EXTENSIONS  
CROSBY #2  
SCHEDULES, NOTES & DETAILS

No.	Revision	By	Date

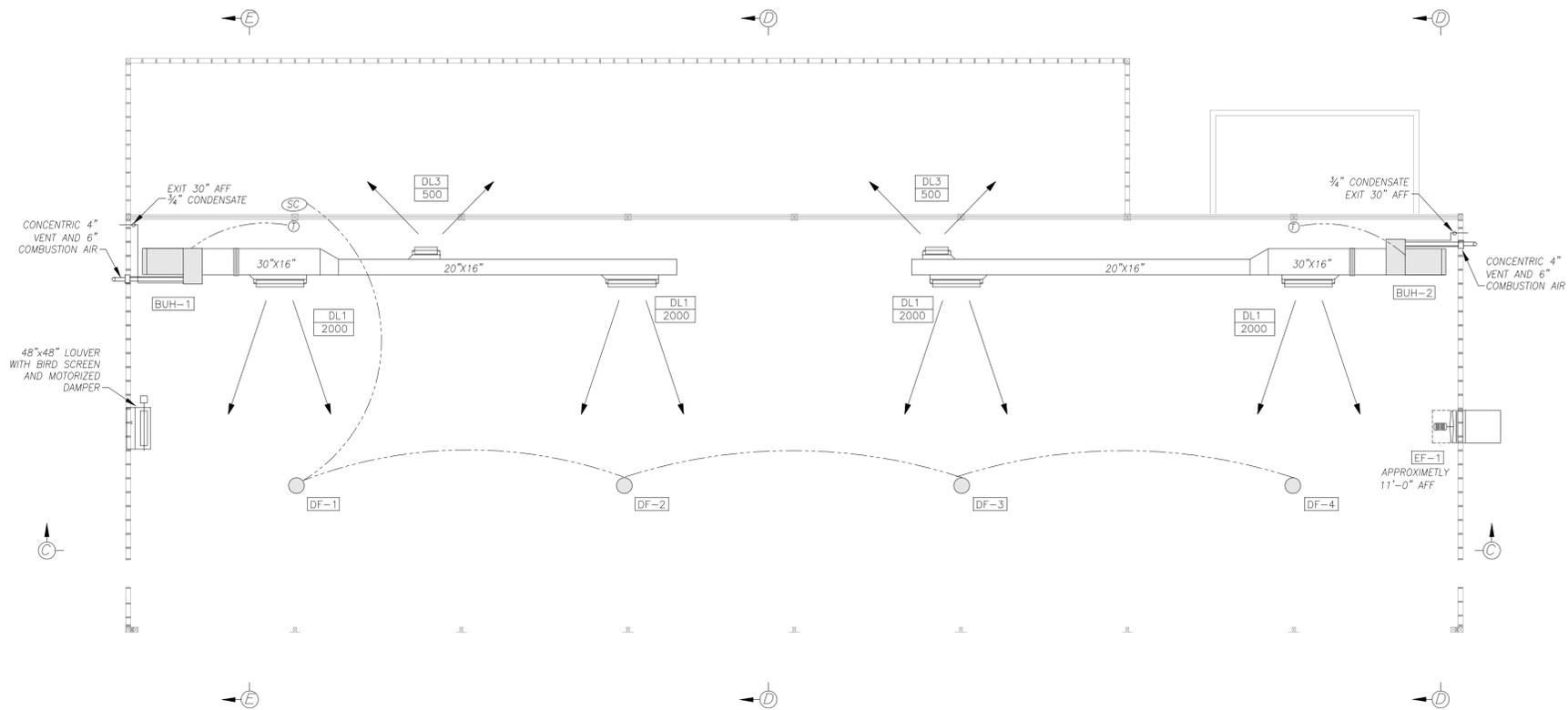
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	By	Date		By	Date	
Designed	KFM	11/18	Checked	KFM	11/18	
Drawn	REM	11/18	In Charge of	REM	11/18	

MTA PROJECT MANAGER: BRIAN TADDEO, PE

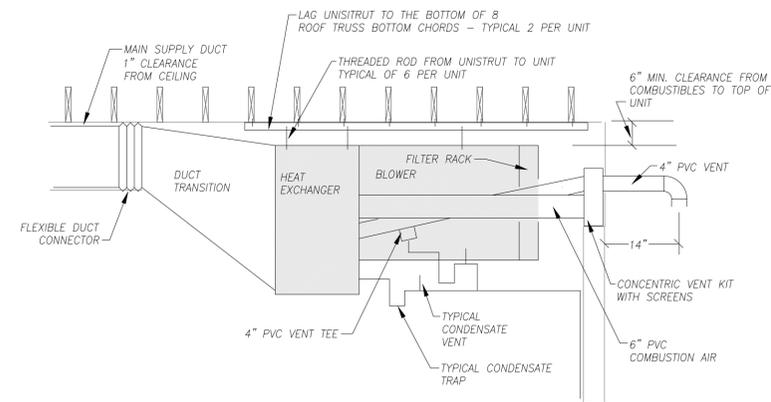
CONTRACT:2018.23

SHEET NUMBER: M6

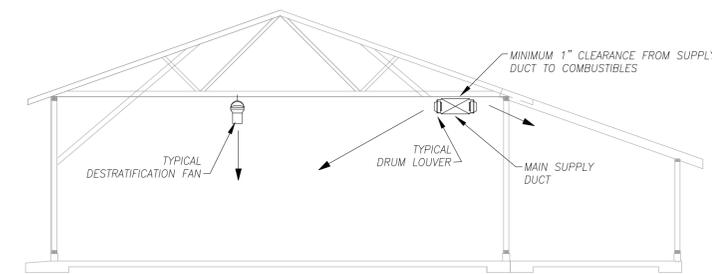
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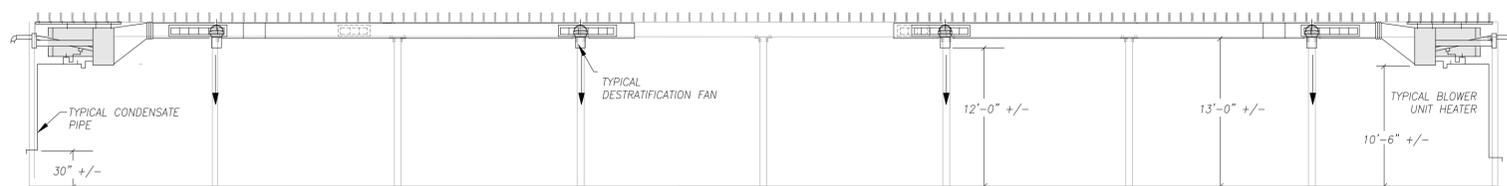
CROSBY #3 PLAN VIEW  
SCALE: 1/8" = 1'-0"



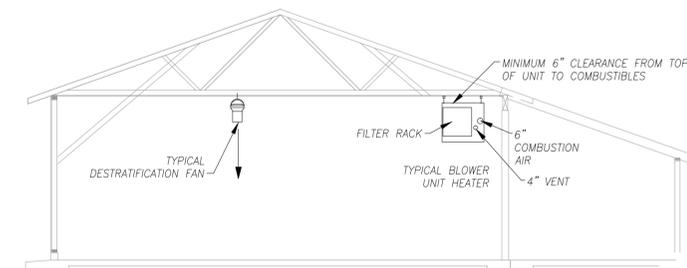
SECTION THROUGH BLOWER UNIT HEATER  
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SECTION E-E  
SCALE: 1/8" = 1'-0"



SECTION C-C  
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Scale:

Designed by:



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340 County Road, Suite 6-C  
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THE GOLD STAR  
MEMORIAL HIGHWAY

MAINTENANCE GARAGE EXTENSIONS  
CROSBY #3  
MECHANICAL PLAN VIEW

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: KFM

By	Date	By	Date
KFM	11/18	Checked	11/18
REM	11/18	In Charge of	11/18

MTA PROJECT MANAGER: BRIAN TADDEO, PE

CONTRACT: 2018.23

SHEET NUMBER: M7

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## GENERAL NOTES

- All systems are to be to meet the following Codes and Standards.
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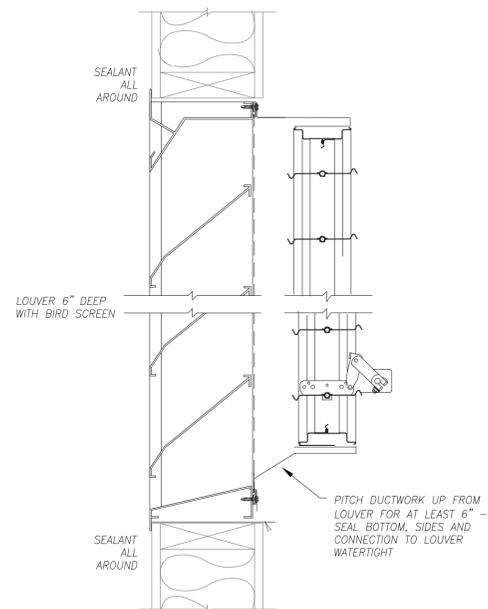
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	SPEED CONTROL



EXTERIOR LOUVER DETAIL  
NO SCALE

CROSBY #3

## DESTRATIFICATION & EXHAUST FAN SCHEDULE

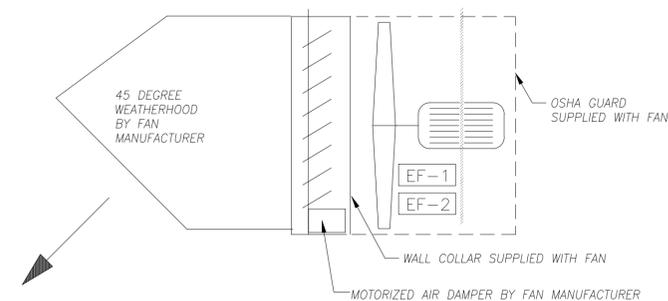
TAG	DESIGN MANUFACTURER & MODEL	TYPE	CFM	ELECTRIC			WEIGHT	REMARKS	CONTROL
				POWER	FLA	HP			
DF-1	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	ARIUS POT-1 POTENTIOMETER SPEED CONTROL FOR MULTIPLE EC MOTORS
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## BLOWER UNIT HEATER SCHEDULE

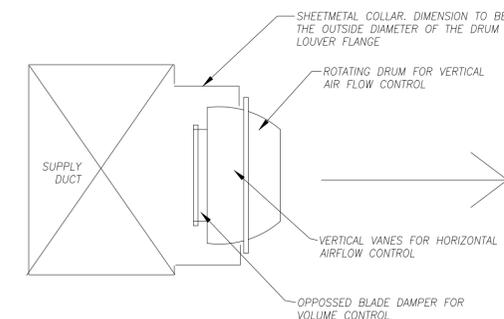
TAG	DESIGN MANUFACTURER & MODEL	BTUH INPUT	BTUH OUTPUT	AFUE	FUEL	CFM	E.S.P.	MOTOR HP	POWER	WEIGHT	REMARKS
BUH-1	MODINE EFFINTY BTC310	310,000	257,000	93 %	LP GAS	4,500	0.50"	2.0	230/60/1	395 LBS	CONDENSING TYPE – SEALED COMBUSTION WITH FACTORY BLOWER ENCLOSURE, FILTER RACK, CONCENTRIC HORIZONTAL VENT KIT, AND 24V CONTROL CIRCUIT
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EXHAUST FAN DETAIL SECTION  
NO SCALE



DRUM LOUVER DETAIL  
NO SCALE



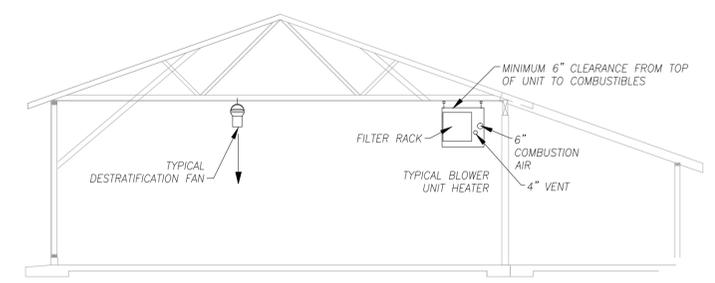
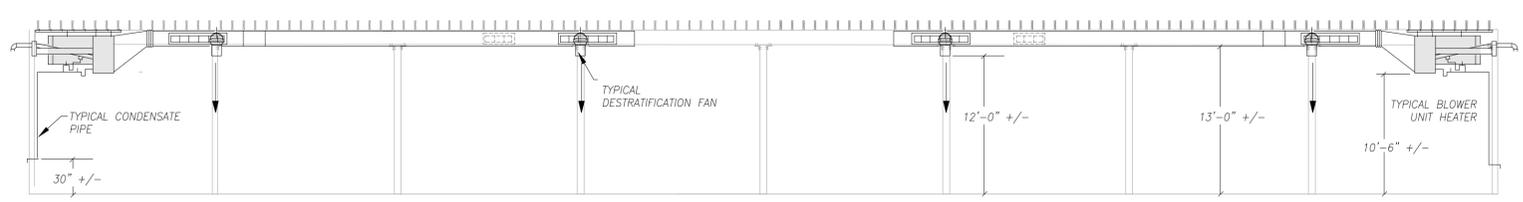
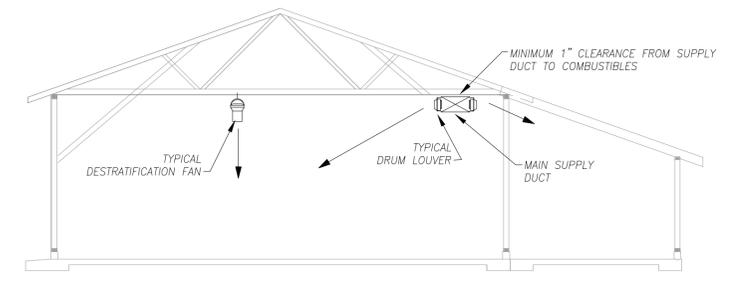
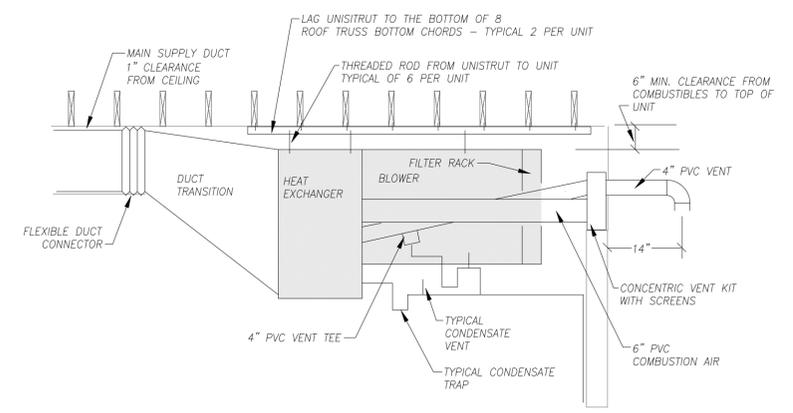
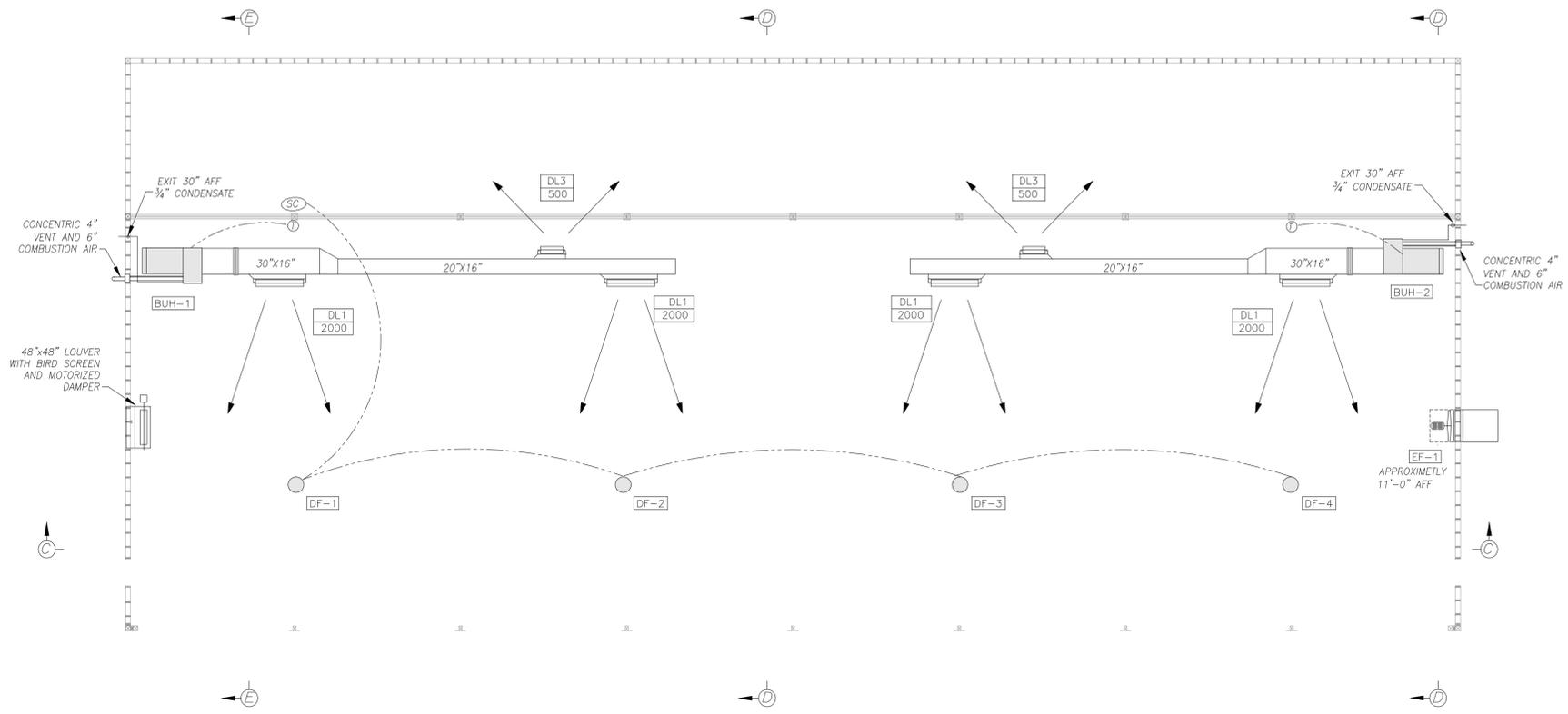
Scale:	Designed by:	<b>HNTB</b>	HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909	 <b>THE GOLD STAR MEMORIAL HIGHWAY</b>	MAINTENANCE GARAGE EXTENSIONS CROSBY #3 SCHEDULES, NOTES & DETAILS								
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	Revision	By	Date					CONSULTANT PROJECT MANAGER: KFM				
No.	Revision	By	Date										
		By	Date	By	Date								
		KFM	11/18	KFM	11/18								
		Checked											
		Drawn	REM 11/18	In Charge of	REM 11/18								

MTA PROJECT MANAGER: BRIAN TADDEO, PE

CONTRACT:2018.23

SHEET NUMBER: M8

48 OF 58



Scale:

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: KFM

	By	Date		By	Date
Designed	KFM	11/18	Checked	KFM	11/18
Drawn	REM	11/18	In Charge of	REM	11/18

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
GRAY  
MECHANICAL PLAN VIEW

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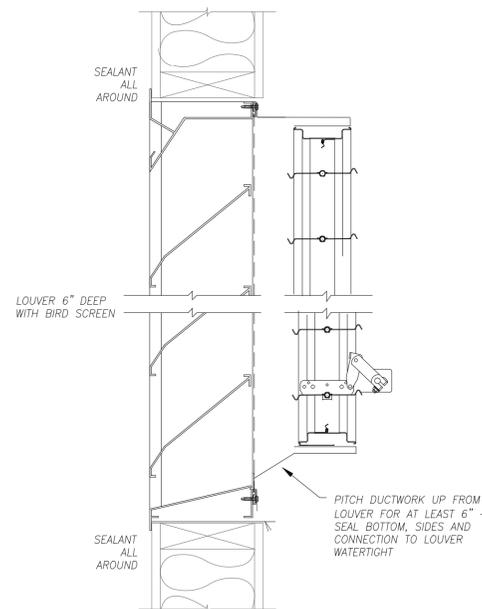
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EXTERIOR LOUVER DETAIL  
NO SCALE

GRAY

## DESTRATIFICATION & EXHAUST FAN SCHEDULE

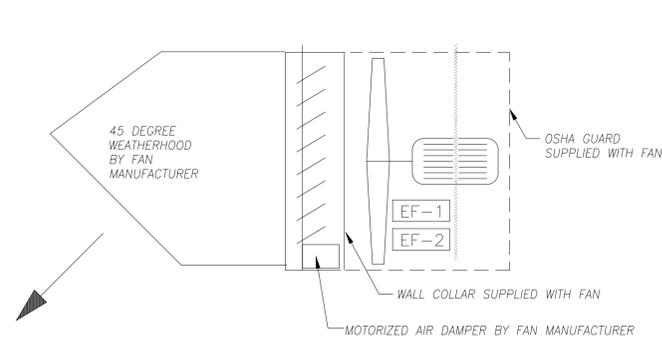
TAG	DESIGN MANUFACTURER & MODEL	TYPE	CFM	ELECTRIC			WEIGHT	REMARKS	CONTROL
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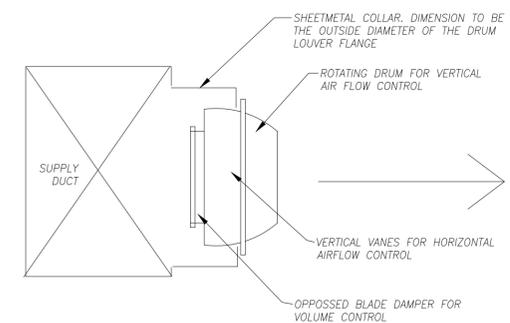
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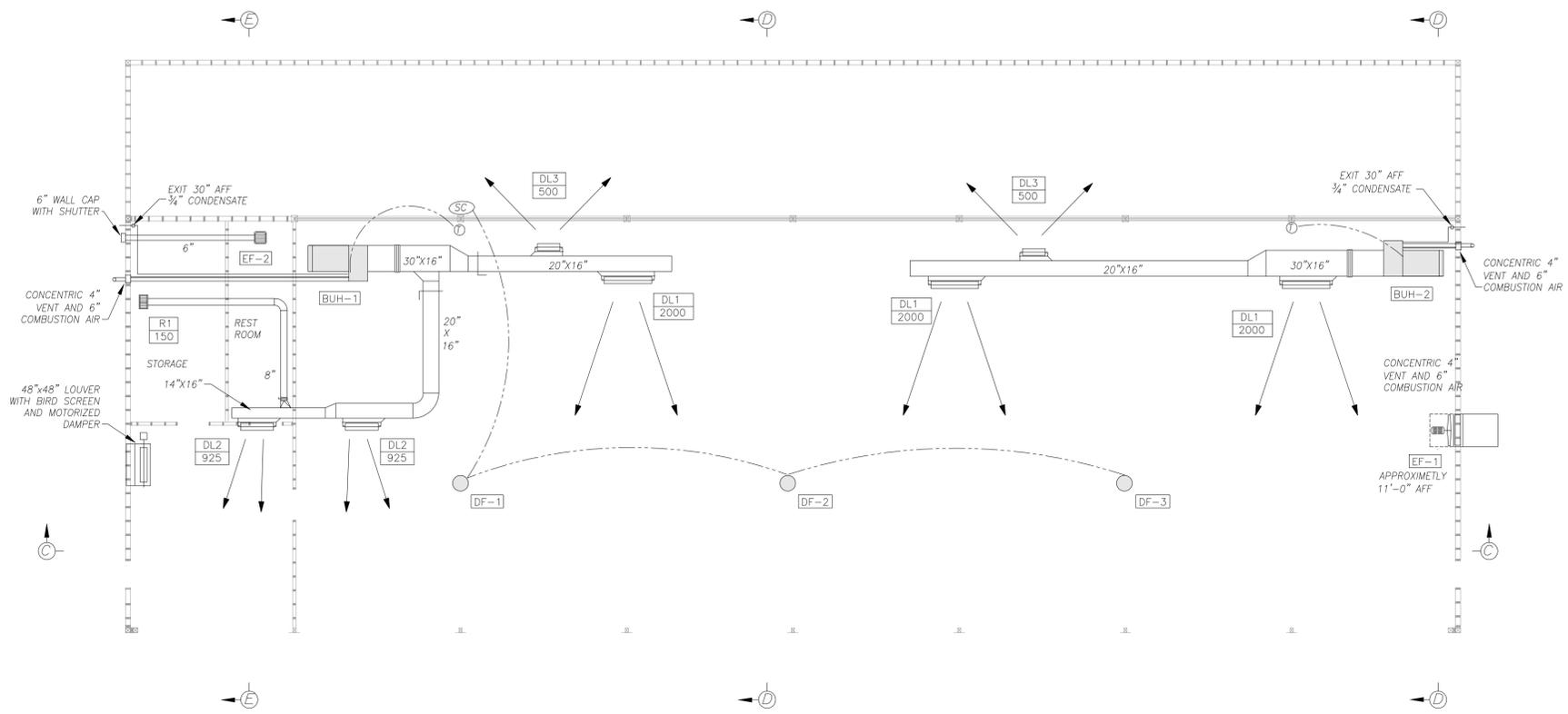
EXHAUST FAN DETAIL SECTION  
NO SCALE



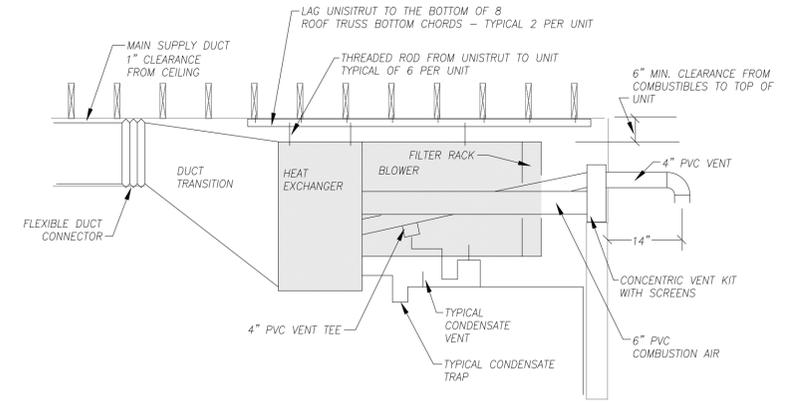
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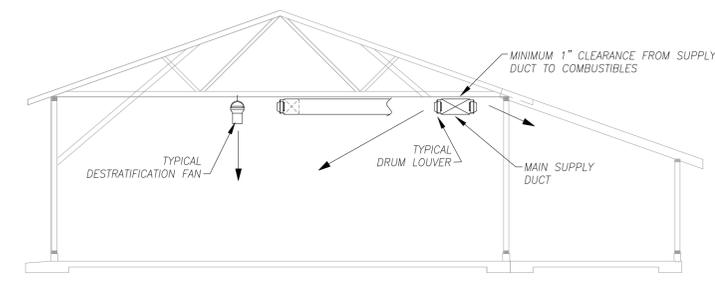
Scale:		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909				THE GOLD STAR MEMORIAL HIGHWAY		MAINTENANCE GARAGE EXTENSIONS GRAY SCHEDULES, NOTES & DETAILS	
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				Designed	KFM	11/18	Checked	KFM	11/18				
				Drawn	REM	11/18	In Charge of	REM	11/18			50 OF 58	



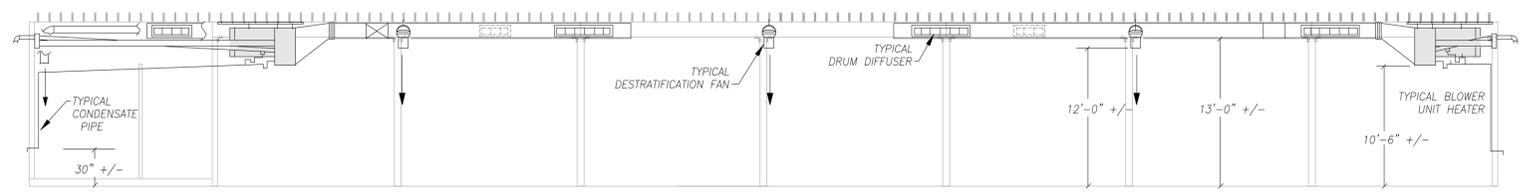
KENNEBUNK #1 PLAN VIEW  
SCALE: 1/8" = 1'-0"



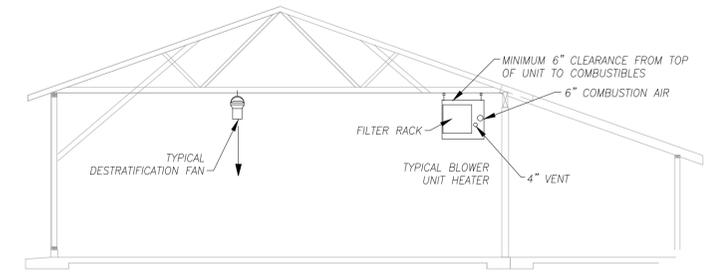
SECTION THROUGH BLOWER UNIT HEATER  
SCALE: 1/2" = 1'-0"



SECTION E-E  
SCALE: 1/8" = 1'-0"



SECTION C-C  
SCALE: 1/8" = 1'-0"



SECTION D-D  
SCALE: 1/8" = 1'-0"



Scale:

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: KFM

	By	Date		By	Date
Designed	KFM	11/18	Checked	KFM	11/18
Drawn	REM	11/18	In Charge of	REM	11/18

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909



THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
KENNEBUNK #1  
MECHANICAL PLAN VIEW

### GENERAL NOTES

- All systems are to be to meet the following Codes and Standards.
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  - ASHRAE 60.1 2007 – Standard for Indoor Air Quality in Commercial Buildings.
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  - NFPA – National Fire Protection Association Standards.
- Do not cut any structural members without pre-approval of structural engineer.

LEGEND	
	FLEXIBLE CONNECTOR
	DRUM LOUVER DIFFUSER
	DOUBLE DEFLECTION DIFFUSER
	MANUAL DAMPER W/LOCKING QUADRANT
	SIDE TAKE-OFF WITH VOLUME DAMPER
	THERMOSTAT
	SPEED CONTROL

### SHEETMETAL NOTES

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### DESTRATIFICATION & EXHAUST FAN SCHEDULE

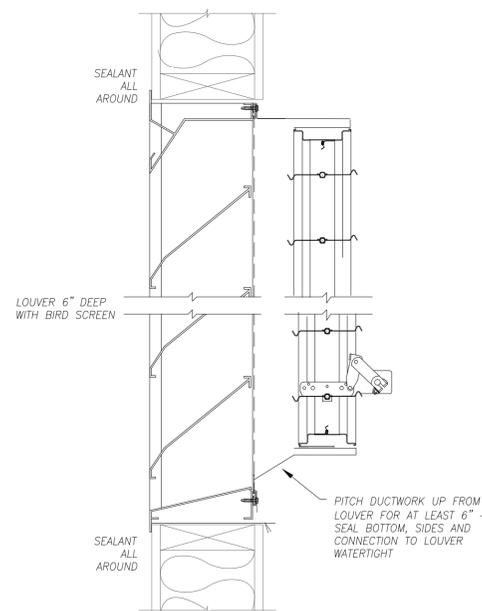
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				POWER	FLA	HP			
DF-1	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	ARIUS POT-1 POTENTIOMETER SPEED CONTROL FOR MULTIPLE EC MOTORS
DF-2	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	
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DF-4	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	
EF-1	GREENHECK S2-30-610b10	SIDEWALL	8,600 @ 0.20" SP	115/60/1		1.0	150 LBS	WITH WALL COLLAR, 115V MOTORIZED DAMPER, MOTOR SIDE GUARD AND EXTERIOR 45 DEG. WEATHER HOOD	WALL STARTER POWERING FAN AND LOUVER
EF-2	NUTONE QTXEN110	CEILING	110	115/60/1	0.4		10 LBS	MAXIMUM 0.7 SONE	POWERED BY LIGHT SWITCH

### BLOWER UNIT HEATER SCHEDULE

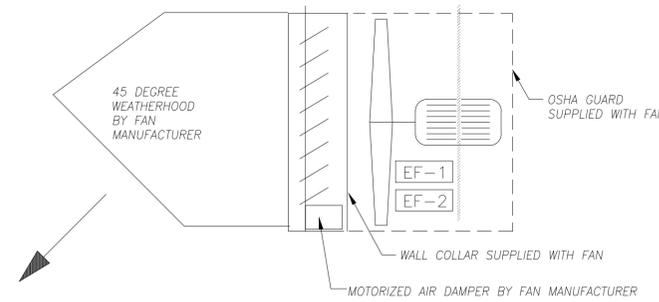
TAG	DESIGN MANUFACTURER & MODEL	BTUH INPUT	BTUH OUTPUT	AFUE	FUEL	CFM	E.S.P.	MOTOR HP	POWER	WEIGHT	REMARKS
BUH-1	MODINE EFFINTY BTC310	310,000	257,000	93 %	NAT. GAS	4,500	0.50"	2.0	230/60/1	395 LBS	CONDENSING TYPE – SEALED COMBUSTION WITH FACTORY BLOWER ENCLOSURE, FILTER RACK, CONCENTRIC HORIZONTAL VENT KIT, AND 24V CONTROL CIRCUIT
BUH-2	MODINE EFFINTY BTC310	310,000	257,000	93 %	NAT. GAS	4,500	0.50"	2.0	230/60/1	395 LBS	

### AIR TERMINAL SCHEDULE

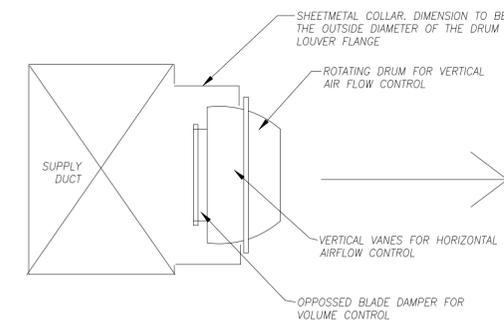
TAG	DESIGN MANUFACTURER & MODEL	SIZE	MAX NC	MAX SP	REMARKS
DL1	PRICE HCD 12/48	48"x12"	30	.07	HIGH CAPACITY DRUM LOUVER DIFFUSER WITH VERTICAL VANES AND OPPOSED BLADE DAMPER
DL2	PRICE HCD 12/18	18"x12"	30	.07	HIGH CAPACITY DRUM LOUVER DIFFUSER WITH VERTICAL VANES AND OPPOSED BLADE DAMPER
DL3	PRICE HCD 6/24	24"x6"	30	.07	HIGH CAPACITY DRUM LOUVER DIFFUSER WITH VERTICAL VANES AND OPPOSED BLADE DAMPER
R1	PRICE 520S	14"x8"	20	.07	DOUBLE DEFLECTION SUPPLY GRILLE



EXTERIOR LOUVER DETAIL  
NO SCALE



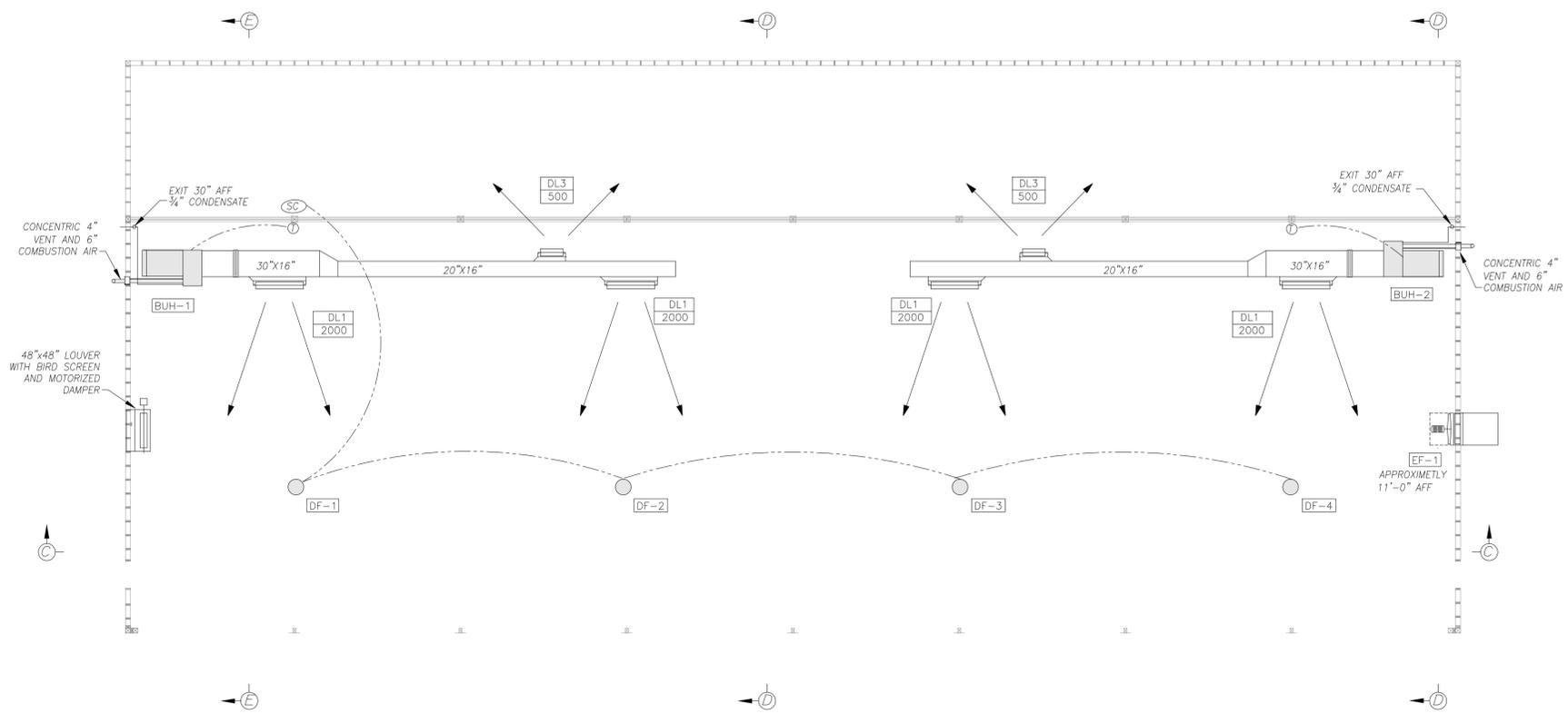
EXHAUST FAN DETAIL SECTION  
NO SCALE



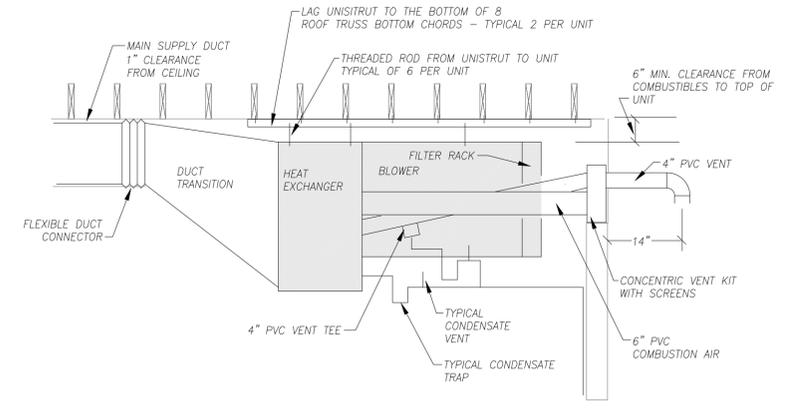
DRUM LOUVER DETAIL  
NO SCALE



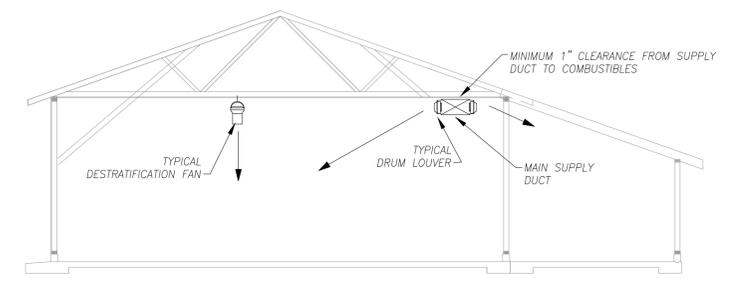
Scale:	Designed by:	<b>HNTB</b>	HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909	 <b>THE GOLD STAR MEMORIAL HIGHWAY</b>	MAINTENANCE GARAGE EXTENSIONS KENNEBUNK #1 SCHEDULES, NOTES & DETAILS																									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	Revision	By	Date									CONSULTANT PROJECT MANAGER: KFM		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>KFM</td> <td>11/18</td> <td>Checked</td> <td>11/18</td> </tr> <tr> <td>REM</td> <td>11/18</td> <td>In Charge of</td> <td>11/18</td> </tr> </tbody> </table>		By	Date	By	Date	KFM	11/18	Checked	11/18	REM	11/18	In Charge of	11/18	MTA PROJECT MANAGER: BRIAN TADDEO, PE	
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			CONTRACT:2018.23		SHEET NUMBER: M12																									
					52 OF 58																									



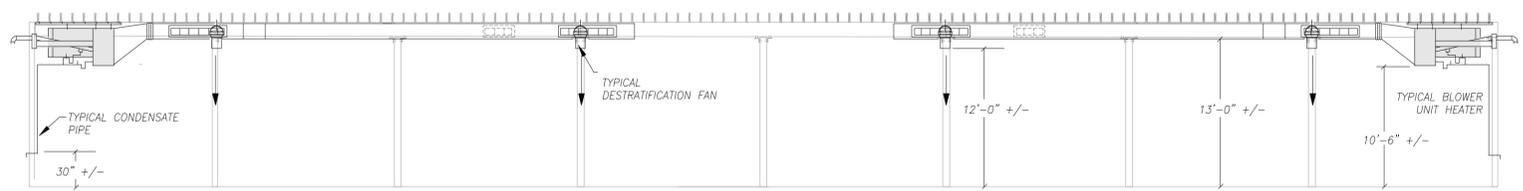
KENNEBUNK #2 PLAN VIEW  
SCALE: 1/8" = 1'-0"



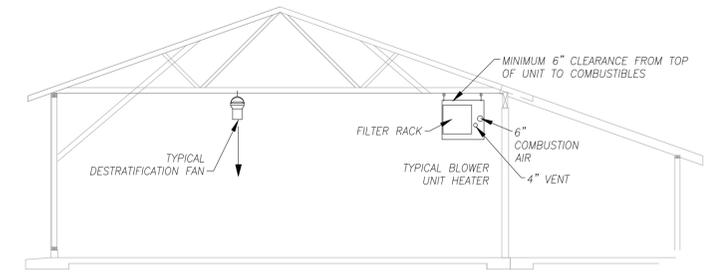
SECTION THROUGH BLOWER UNIT HEATER  
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SECTION E-E  
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SECTION C-C  
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Scale:

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**HNTB**

CONSULTANT PROJECT MANAGER: KFM

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KFM	11/18		KFM	11/18
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HNTB CORPORATION  
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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
KENNEBUNK #2  
MECHANICAL PLAN VIEW

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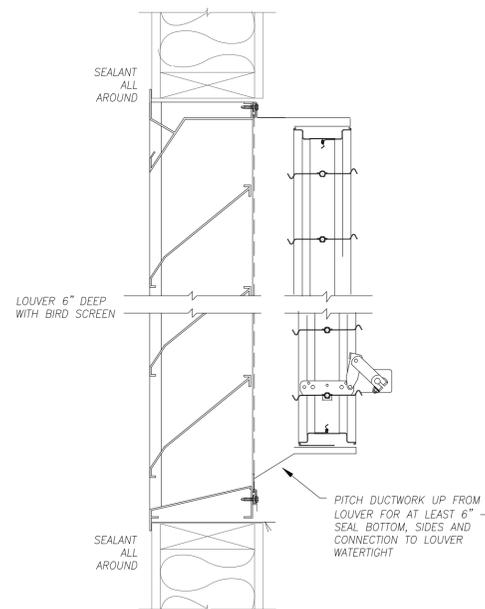
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	DRUM LOUVER DIFFUSER
	DOUBLE DEFLECTION DIFFUSER
	MANUAL DAMPER W/LOCKING QUADRANT
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	THERMOSTAT
	SPEED CONTROL



EXTERIOR LOUVER DETAIL  
NO SCALE

## KENNEBUNK #2

## DESTRATIFICATION & EXHAUST FAN SCHEDULE

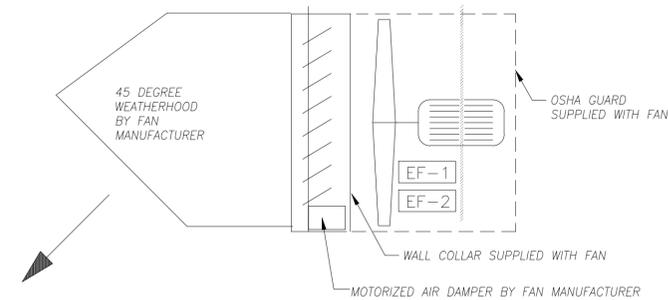
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				POWER	FLA	HP			
DF-1	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	ARIUS POT-1 POTENTIOMETER SPEED CONTROL FOR MULTIPLE EC MOTORS
DF-2	ARIUS AIR PEAR 45-EL	CEILING HUNG	0-1180	115/60/1	2.2		14 LBS	ECM MOTOR – GRAY COLOR	
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EF-1	GREENHECK S2-30-610b10	SIDEWALL	8,600 @ 0.20" SP	115/60/1		1.0	150 LBS	WITH WALL COLLAR, 115V MOTORIZED DAMPER, MOTOR SIDE GUARD AND EXTERIOR 45 DEG. WEATHER HOOD	WALL STARTER POWERING FAN AND LOUVER

## BLOWER UNIT HEATER SCHEDULE

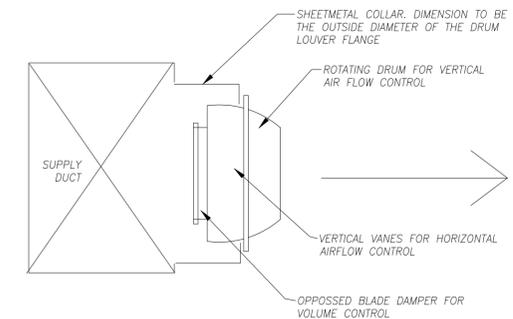
TAG	DESIGN MANUFACTURER & MODEL	BTUH INPUT	BTUH OUTPUT	AFUE	FUEL	CFM	E.S.P.	MOTOR HP	POWER	WEIGHT	REMARKS
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EXHAUST FAN DETAIL SECTION  
NO SCALE



DRUM LOUVER DETAIL  
NO SCALE



Scale:

Designed by:

**HNTB**

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909



THE GOLD STAR  
MEMORIAL HIGHWAY

MAINTENANCE GARAGE EXTENSIONS  
KENNEBUNK #2  
SCHEDULES, NOTES & DETAILS

No.	Revision	By	Date

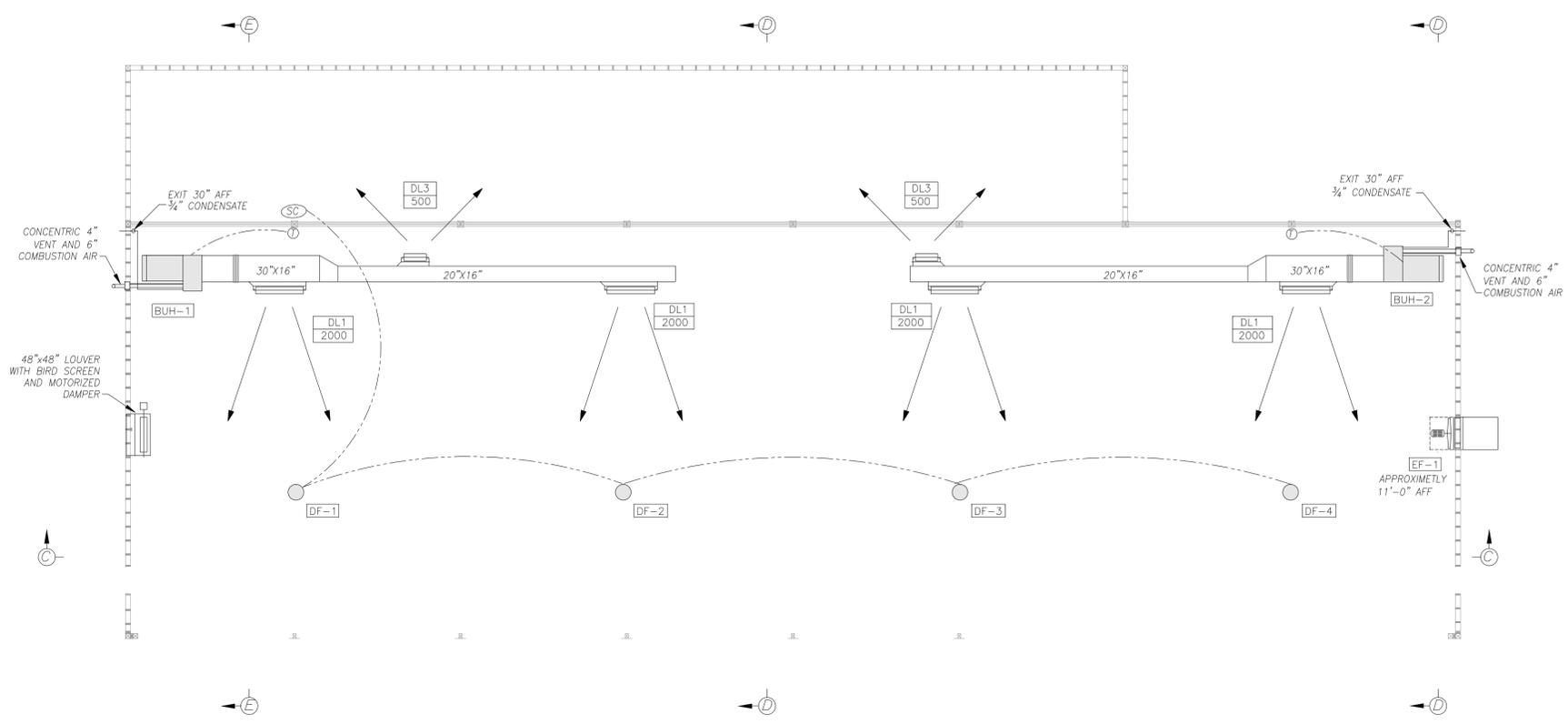
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	By	Date		By	Date	
	KFM	11/18	Checked	KFM	11/18	
	Drawn	REM	11/18	In Charge of	REM	11/18

MTA PROJECT MANAGER: BRIAN TADDEO, PE

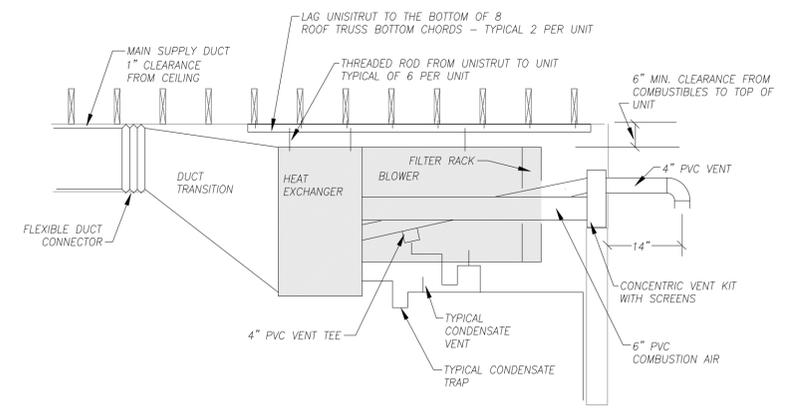
CONTRACT:2018.23

SHEET NUMBER: M14

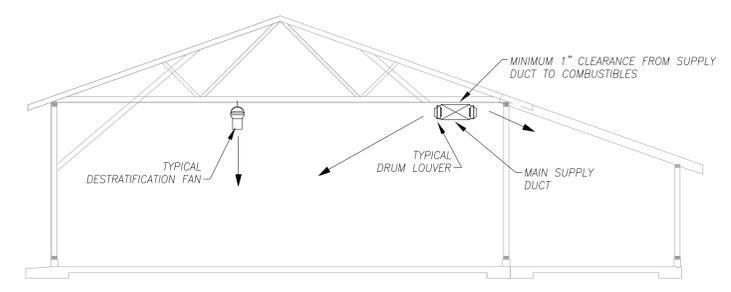
54 OF 58



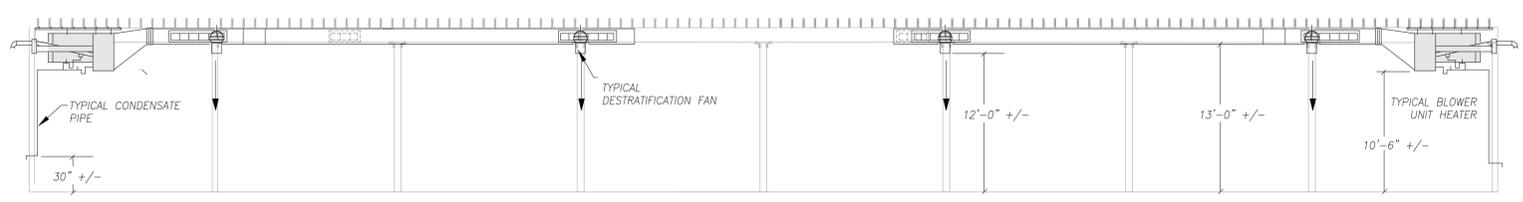
LITCHFIELD PLAN VIEW  
SCALE: 1/8" = 1'-0"



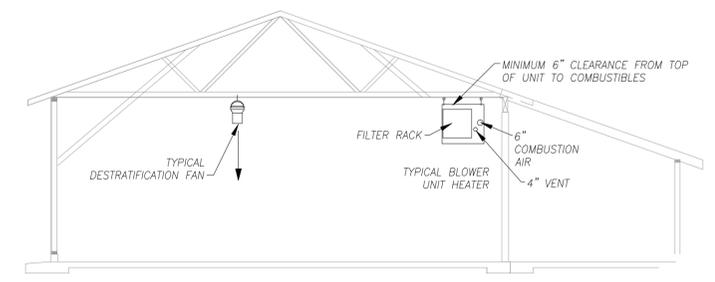
SECTION THROUGH BLOWER UNIT HEATER  
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SECTION D-D  
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Scale:

No.	Revision	By	Date

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: KFM

By	Date	Checked	By	Date
KFM	11/18		KFM	11/18
REM	11/18	In Charge of	REM	11/18

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS  
LITCHFIELD  
MECHANICAL PLAN VIEW

SHEET NUMBER: M15  
CONTRACT: 2018.23  
55 OF 58

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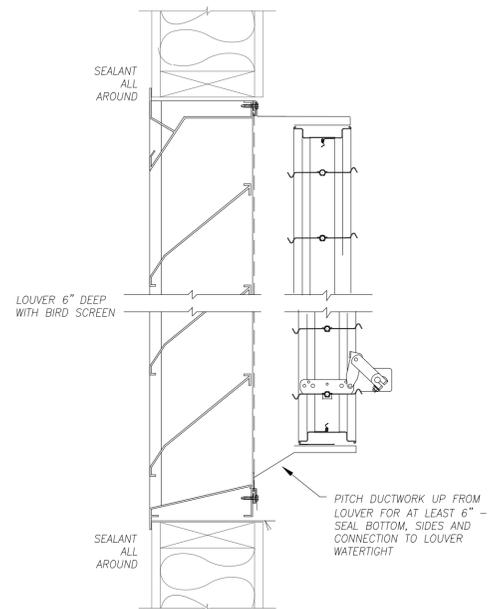
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EXTERIOR LOUVER DETAIL  
NO SCALE

## LITCHFIELD

### DESTRATIFICATION & EXHAUST FAN SCHEDULE

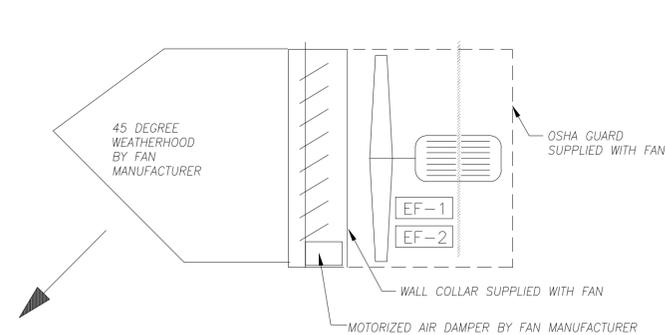
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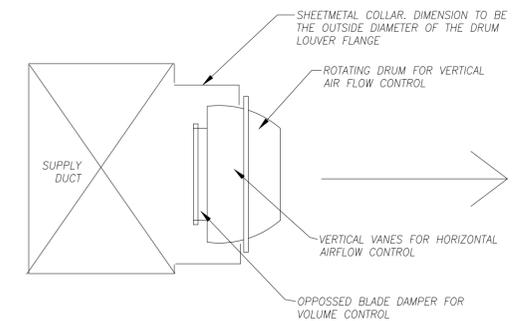
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EXHAUST FAN DETAIL SECTION  
NO SCALE



DRUM LOUVER DETAIL  
NO SCALE



Scale:

Designed by:

**HNTB**

HNTB CORPORATION  
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THE GOLD STAR  
MEMORIAL HIGHWAY

MAINTENANCE GARAGE EXTENSIONS  
LITCHFIELD  
SCHEDULES, NOTES & DETAILS

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: KFM

	By	Date		By	Date
Designed	KFM	11/18	Checked	KFM	11/18
Drawn	REM	11/18	In Charge of	REM	11/18

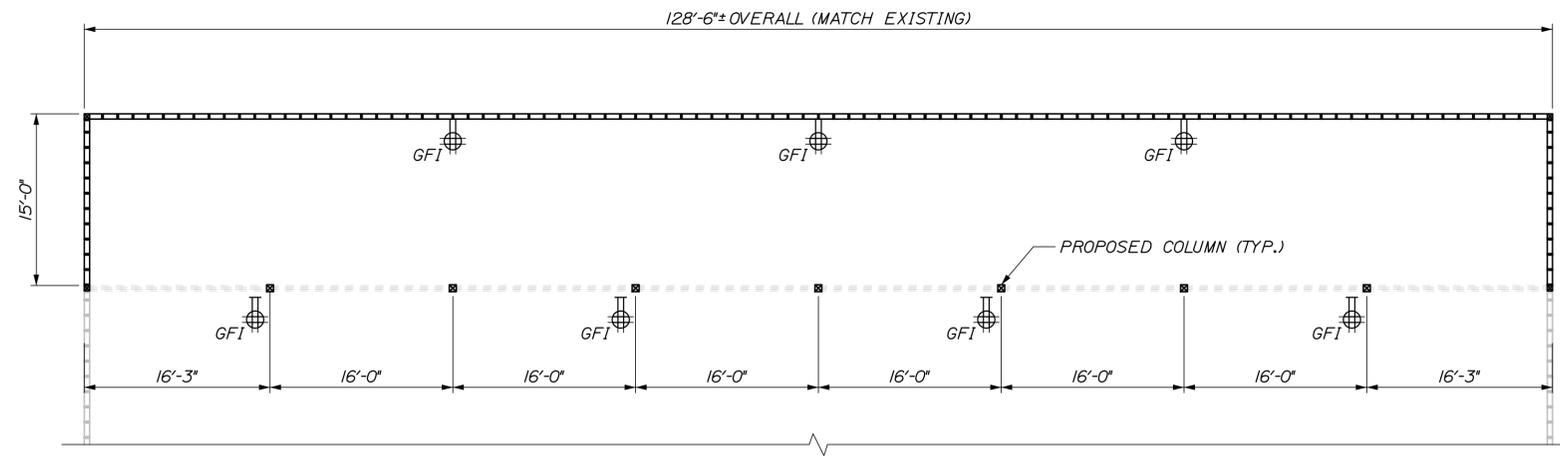
MTA PROJECT MANAGER: BRIAN TADDEO, PE

CONTRACT:2018.23

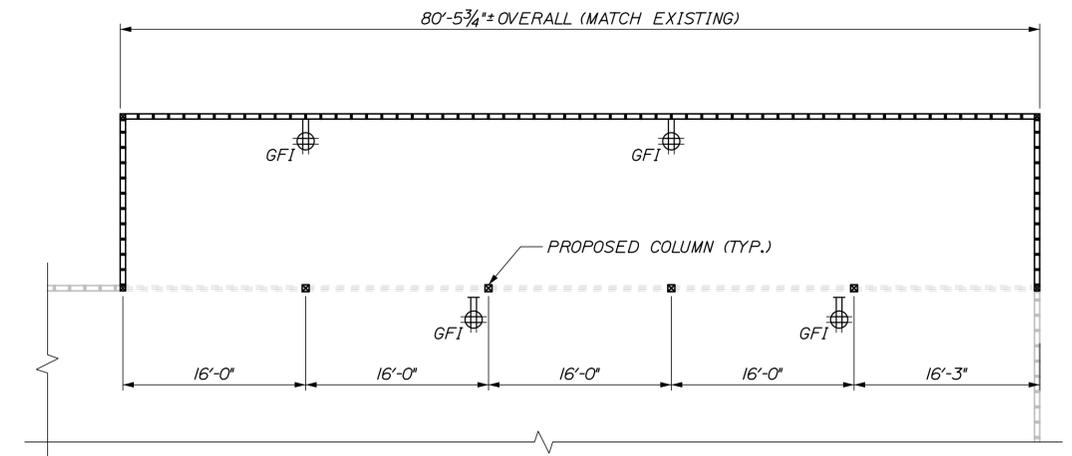
SHEET NUMBER: M16

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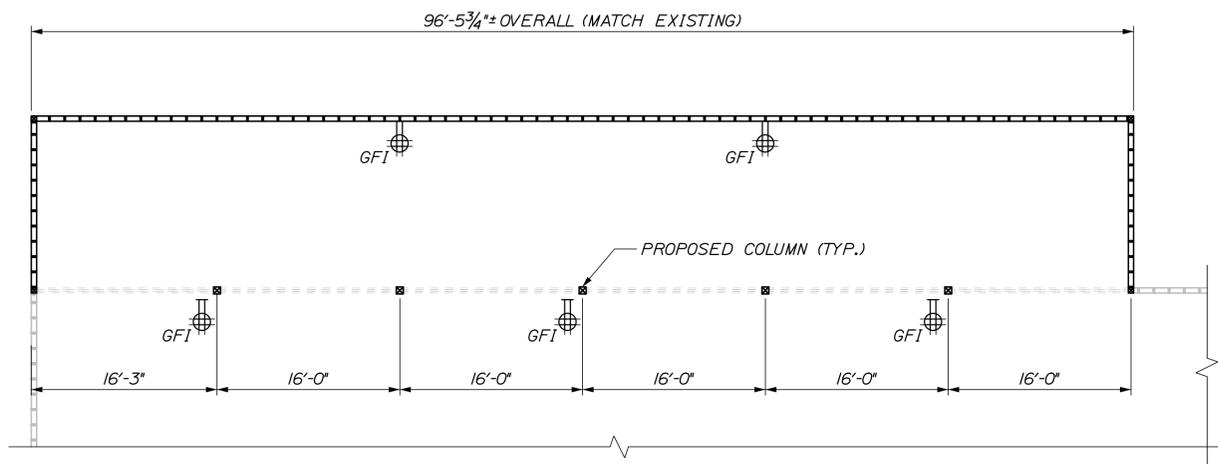
Date: 11/12/2018



PROPOSED ELECTRICAL PLAN VIEW - KENNEBUNK #1, KENNEBUNK #2, AND GRAY  
SCALE: N.T.S.



PROPOSED ELECTRICAL PLAN VIEW - AUBURN  
SCALE: N.T.S.



PROPOSED ELECTRICAL PLAN VIEW - LITCHFIELD  
SCALE: N.T.S.

**ELECTRICAL SYMBOLS:**  
NOT TO SCALE

SYMBOL	DESCRIPTION
	125V, 20A, QUAD GROUND FAULT RECEPTACLE

**ELECTRICAL NOTES:**

- ALL PROPOSED CONDUIT IN EXTENDED SECTION OF GARAGE SHALL BE SURFACE MOUNTED AND MATCH EXISTING FEEDER CONDUIT.
- ALL RECEPTACLE BOXES SHALL BE SURFACE MOUNTED.
- ONE EXTERIOR MOUNTED QUAD RECEPTACLE SHALL BE MOUNTED ON THE OUTSIDE OF EACH OF THE THREE 8-BAY GARAGES IN GRAY AND KENNEBUNK. THE RECEPTACLES WILL BE LOCATED BY A MTA MAINTENANCE REPRESENTATIVE.
- ALL NEEDED ELECTRICAL WORK SHALL BE INCIDENTAL TO THE LUMP SUM BUILDING ITEM.
- TWO (2) ADDITIONAL RECEPTACLES SHALL BE INSTALLED ON THE EXTERIOR OF EACH BUILDING. RECEPTACLES WILL BE FIELD LOCATED BY THE RESIDENT.

Filename: 057\_Electrical Plans\_1.dgn

No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

HNTB CORPORATION  
340 County Road, Suite 6-C  
Westbrook, ME 04092  
TEL (207) 774-5155  
FAX (207) 228-0909



**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

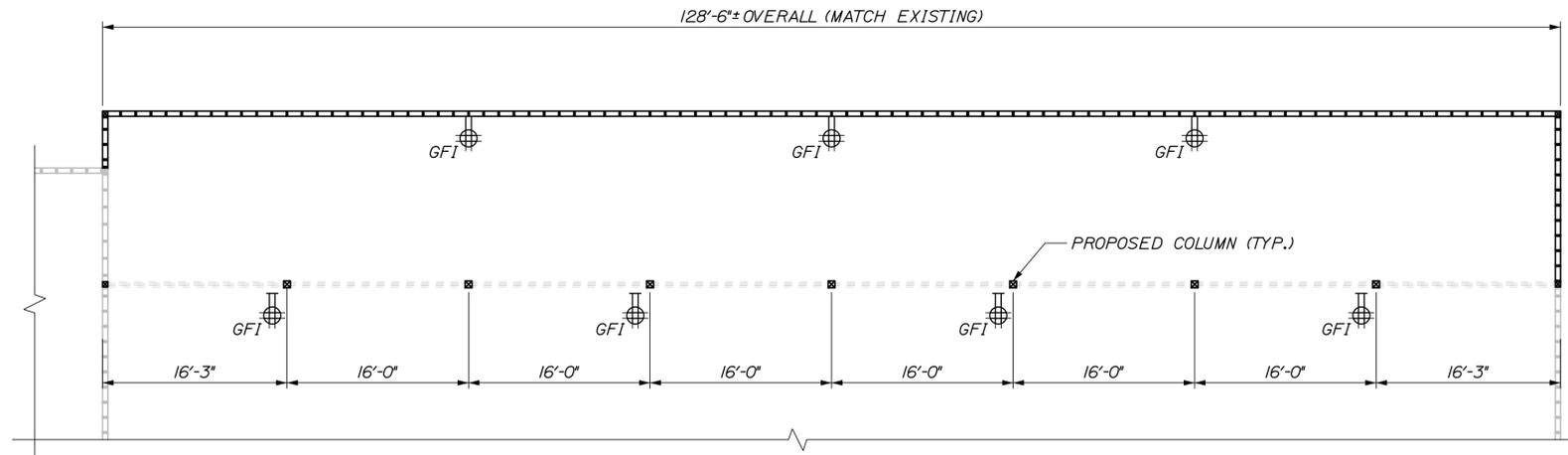
ELECTRICAL PLANS I

SHEET NUMBER: E1

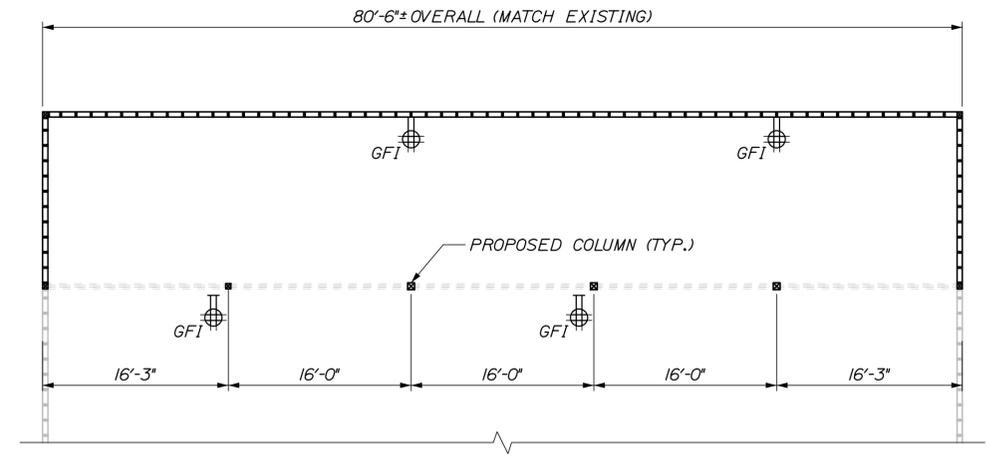
CONTRACT: 2018.23

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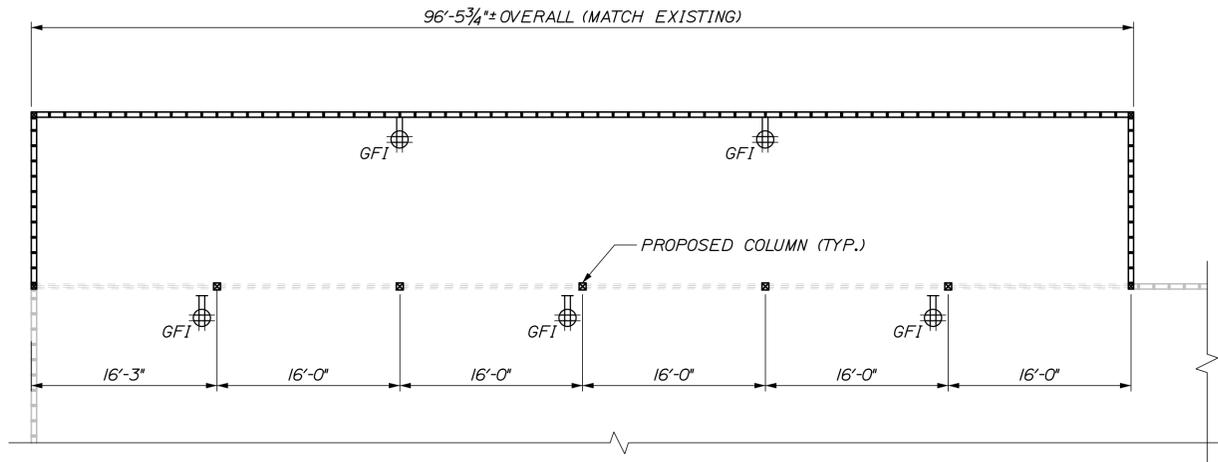
Date: 11/12/2018



**PROPOSED ELECTRICAL PLAN VIEW - CROSBY #1**  
SCALE: N.T.S.



**PROPOSED ELECTRICAL PLAN VIEW - CROSBY #2**  
SCALE: N.T.S.



**PROPOSED ELECTRICAL PLAN VIEW - CROSBY #3**  
SCALE: N.T.S.

**ELECTRICAL SYMBOLS:**  
NOT TO SCALE

SYMBOL	DESCRIPTION
	125V, 20A, QUAD GROUND FAULT RECEPTACLE

**ELECTRICAL NOTES:**

1. ALL PROPOSED CONDUIT IN EXTENDED SECTION OF GARAGE SHALL BE SURFACE MOUNTED AND MATCH EXISTING FEEDER CONDUIT.
2. ALL RECEPTACLE BOXES SHALL BE SURFACE MOUNTED.
3. ONE EXTERIOR MOUNTED QUAD RECEPTACLE SHALL BE MOUNTED ON THE OUTSIDE OF EACH OF THE THREE 8-BAY GARAGES IN GRAY AND KENNEBUNK. THE RECEPTACLES WILL BE LOCATED BY A MTA MAINTENANCE REPRESENTATIVE.
4. ALL NEEDED ELECTRICAL WORK SHALL BE INCIDENTAL TO THE LUMP SUM BUILDING ITEM.
5. TWO (2) ADDITIONAL RECEPTACLES SHALL BE INSTALLED ON THE EXTERIOR OF EACH BUILDING. RECEPTACLES WILL BE FIELD LOCATED BY THE RESIDENT.

Filename: 058\_Electrical Plans\_2.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
<b>HNTB</b>					
CONSULTANT PROJECT MANAGER: BRUCE MUNGER, PE					
	By	Date		By	Date
Designed	BRG	11\17	Checked	RBM	11\17
Drawn	ERB	11\17	In Charge of	RAL	11\17

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: BRIAN TADDEO, PE

MAINTENANCE GARAGE EXTENSIONS

ELECTRICAL PLANS II

SHEET NUMBER: E2

CONTRACT: 2018.23

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