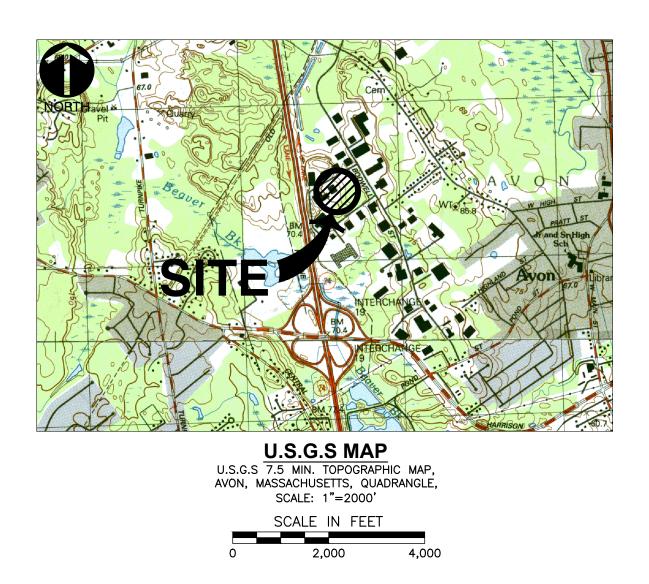
# WASTE MANAGEMENT RECYCLING FACILITY BUILDING EXPANSION

20 LEDIN AVENUE, AVON, MA NORFOLK COUNTY

LOCAL PERMITTING APRIL 23, 2021



#### OWNER/TEAM INFORMATION

**CIVIL ENGINEER** 

CIVIL & ENVIRONMENTAL CONSULTANTS, INC. 31 BELLOWS ROAD RAYNHAM, MA 02767

PH: (774) 501–2176 CONTACTS: KARLIS SKULTE, P.E.

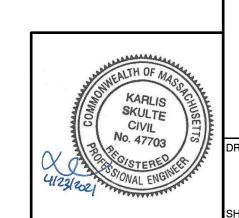
**BUILDING DESIGNER** BUTLER MANUFACTURING 1540 GENESSEE STREET KANSAS CITY, MO 64102 **APPLICANT** 

WASTE MANAGEMENT OF MASSACHUSETTS, INC. 26 PATRIOT PLACE FOXBORO, MA 02035 PH: (508) 549-8057 CONTACTS: PETER RICHER, P.E.

	SITE MAP	
	SCALE: 1"=200'	
	SCALE IN FEET	
0	200	400
REFERENCE		

ORTHOGRAPHIC AERIAL IMAGERY, MAPS AND PARCELS ARE BASED ON GIS DATA PROVIDED BY THE BUREAU OF GEOGRAPHIC INFORMATIONS (MASSGIS), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF TECHNOLOGY AND SECURITY SYSTEMS. ACCESSED JULY 2019.

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#### **GENERAL NOTES**

- 1. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- 2. EXISTING SITE INFORMATION / TOPOGRAPHIC SURVEY WAS PREPARED BY WSP USA. INC., DATED MARCH 29, 2019 AND REVISED ON JULY 25, 2019. CEC IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN
- 3. WETLAND FLAGS WF-A1 THROUGH WF-A6 DELINEATED BY LUCAS ENVIRONMENTAL, LLC IN JULY, 2019.
- 4. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES (INCLUDING THOSE LABELED PER RECORD DATA) PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
- 5. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK
- 6. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND OWNER'S REPRESENTATIVE FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES OCCURRING IN THE COURSE OF THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
- 7. CONTRACTOR SHALL OBTAIN A PERMIT FOR ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.
- 8. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL APPLICABLE PERMITS, AND PAY ALL REQUIRED FEES PRIOR TO BEGINNING WORK.
- 9. ANY WORK PERFORMED IN THE LOCAL OR STATE RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL OR STATE REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FOR THE WORK, SCHEDULE NECESSARY INSPECTIONS, AND PROVIDE THE NECESSARY TRAFFIC CONTROL MEASURES AND DEVICES, ETC., FOR WORK PERFORMED IN THE RIGHT OF WAYS.
- 10. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL, PRACTICES REQUIRED BY THE TOWN OF AVON, NORFOLK COUNTY AND THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION.
- 11. ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH SPECIFICATIONS. IF NO SPECIFICATIONS ARE SUPPLIED, USE THE STATE OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION SECTION 751.
- 12. ITEM NUMBERS REFER TO THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION 1988 ENGLISH STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGE AND SUBSEQUENT SUPPLEMENTAL SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE TOWN OF AVON AND NORFOLK COUNTY. WHEN IN CONFLICT, THE NORFOLK COUNTY REQUIREMENTS SHALL PREVAIL.
- 13. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT.
- 14. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE PROJECT.
- 15. BEFORE INSTALLATION OF STORM OR SANITARY SEWER, OR OTHER UTILITY, THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT HE IS NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION.
- 16. ADJUST/RECONSTRUCT ALL EXISTING CASTINGS, CLEANOUTS, ETC. WITHIN PROJECT AREA TO GRADE AS REQUIRED.

#### **DEMOLITION NOTES**

- 1. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO THE APPROPRIATE UTILITY COMPANY STANDARDS AND AT THE CONTRACTOR'S EXPENSE.
- 2. ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY / AGENCY.
- 3. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR OBTAINS PRIOR WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
- 4. EROSION & SEDIMENT CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY

INSTALLED AND FUNCTION PROPERLY PRIOR TO INITIALIZATION OF DEMOLITION ACTIVITIES.

SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.

- 5. ASBESTOS OR HAZARDOUS MATERIALS ARE NOT EXPECTED/ANTICIPATED IF FOUND ON SITE, SUCH MATERIALS SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR
- 6. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL AND OSHA REGULATIONS DURING ALL DEMOLITION ACTIVITIES.
- 7. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
- 8. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES TO REMAIN. ANY ITEMS TO REMAIN THAT HAVE BEEN DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
- 9. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC.. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
- 10. ALL UTILITY AND STRUCTURE REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED AND PROPERLY DOCUMENTED BY A CERTIFIED PROFESSIONAL, WHEN APPLICABLE, WITH THE APPROPRIATE UTILITY COMPANY, MUNICIPALITY AND/OR AGENCY. DEMOLITION OF REGULATED ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO WELLS, ASBESTOS, UNDER GROUND STORAGE TANKS, SEPTIC TANKS AND ELECTRIC TRANSFORMERS. DEMOLITION CONTRACTOR SHALL REFER TO ANY ENVIRONMENTAL STUDIES FOR DEMOLITION RECOMMENDATIONS AND GUIDANCE. AVAILABLE ENVIRONMENTAL STUDIES MAY INCLUDE, BUT ARE NOT LIMITED TO PHASE I ESA, PHASE II WETLAND AND STREAM DELINEATION AND ASBESTOS SURVEY. ALL APPLICABLE ENVIRONMENTAL STUDIES SHALL BE MADE AVAILABLE UPON REQUEST.
- 11. ALL PAVEMENT, BASE COURSES, SIDEWALKS, CURBS, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE AREA TO BE DEMOLISHED SHALL BE REMOVED TO FULL DEPTH. EXISTING BASE COURSE MATERIALS MAY BE WORKED INTO THE NEW PAVEMENT OR BUILDING SUBGRADE IF THE GRADATION, CONSISTENCY, COMPACTION, SUBGRADE CONDITION, ETC., ARE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS OF THE REPORT OF GEOTECHNICAL INVESTIGATION. BASE COURSE MATERIALS SHALL NOT BE WORKED INTO THE SUBGRADE AREAS TO RECEIVE LANDSCAPING.
- 12. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITIES.

#### LAYOUT NOTES

- 1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
- 2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION.
- PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD
  ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING IRRIGATION
  SLEEVING, PRIOR TO INSTALLATION OF PAVED SURFACES.
- 4. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN, WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
- 5. COORDINATES ARE FOR BUILDING COLUMNS, EXTERIOR BUILDING WALL, CENTER OF DRIVEWAYS, CENTER OF SANITARY SEWER MANHOLES, AND CENTER OF STRUCTURE PLACED SIX INCHES INSIDE FACE OF CURB FOR DRAIN INLETS, UNLESS OTHERWISE NOTED.
- 6. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT / RECORD DRAWINGS ON-SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
- REFER TO THE ARCHITECTURAL, PLUMBING & ELECTRICAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRY LOCATIONS AND PRECISE BUILDING DIMENSIONS.
- 8. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH THE TOWN OF AVON. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS PAVEMENT, ADDITION / DELETION OF PARKING SPACES, MOVEMENT OF CURB LINES, CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, LANDSCAPING, ETC.

#### STORM DRAINAGE NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
- 2. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
- 3. FOR EXACT LOCATION OF DOWN SPOUTS & ROOF DRAINS, CONTRACTOR IS TO COORDINATE WITH ARCHITECTURAL AND PLUMBING DRAWINGS.
- 4. ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER.
- 5. THE CONTRACTOR IS TO CONSTRUCT CURBS, CATCH BASINS, DOWNSPOUTS, PIPING AND CONNECTION ETC. AS REQUIRED TO CONVEY THE ROOF AND PAVED SURFACE DRAINAGE TO THE DETENTION BASIN.

#### **UTILITY NOTES**

- 1. THE CONTRACTOR IS PARTICULARLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF THE EXISTING UTILITIES SHOWN HEREON IS BASED ON TOPOGRAPHIC SURVEYS AND RECORD DRAWINGS. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE EXISTING UTILITIES CONFLICTING WITH IMPROVEMENTS SHOWN HEREON IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- 2. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF
- 3. SANITARY SEWER SHALL BE LOCATED 18" BELOW WATERMAIN AT ALL CROSSINGS. WATERMAIN SHALL BE LOCATED A MINIMUM OF 10' HORIZONTALLY FROM ANY SANITARY SEWER OR STORM SEWER. ALL MEASUREMENTS SHALL BE TAKEN FROM OUTSIDE OF SEWER PIPE TO THE OUTSIDE OF WATERMAIN PIPE. ONE FULL LENGTH OF WATERMAIN PIPE SHALL BE LOCATED AT ALL CROSSINGS TO ENABLE BOTH JOINTS TO BE LOCATED AS FAR FROM SEWER AS POSSIBLE.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES, GAS LINES, AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO PAVEMENT CONSTRUCTION.
- 5. ALL TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- 6. ROOF DRAINS, FOUNDATION DRAINS AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.
- 7. ADJUST ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO CASTINGS, VALVE BOXES, PEDESTALS, CLEANOUTS, ETC. TO MATCH PROPOSED FINISHED GRADES, UNLESS OTHERWISE INDICATED.
- 8. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF ALL IMPROVEMENTS. INCLUDE AT LEAST TWO DIMENSIONS TO EACH VALVE AND MANHOLE FROM KNOWN SITE FEATURES. DRAWINGS SHALL INCLUDE HORIZONTAL AND VERTICAL INFORMATION ON ALL NEW UTILITIES AS WELL AS EXISTING UTILITIES ENCOUNTERED.
- 9. MECHANICAL/ELECTRICAL CONTRACTORS SHALL BRING ALL UTILITIES 5' OUTSIDE BUILDING WALL. COORDINATE WITH OWNER.

NO DATE DESCRIPTION

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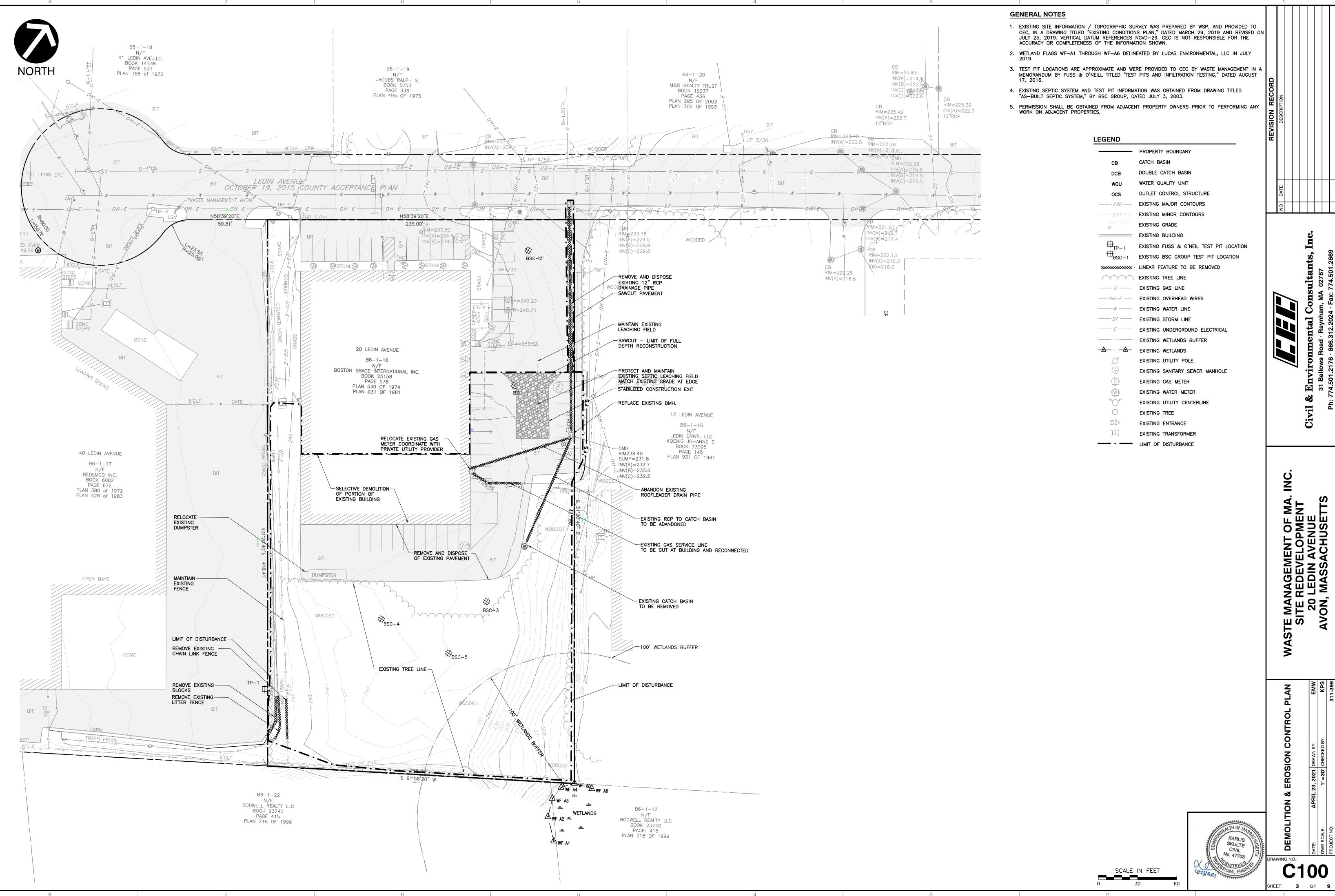
Civil & Environme
31 Bellows Road
Ph: 774.501.2176 · 866.3

TE MANAGEMENT OF MA. I SITE REDEVELOPMENT 20 LEDIN AVENUE AVON, MASSACHUSETTS

GENERAL NOTES

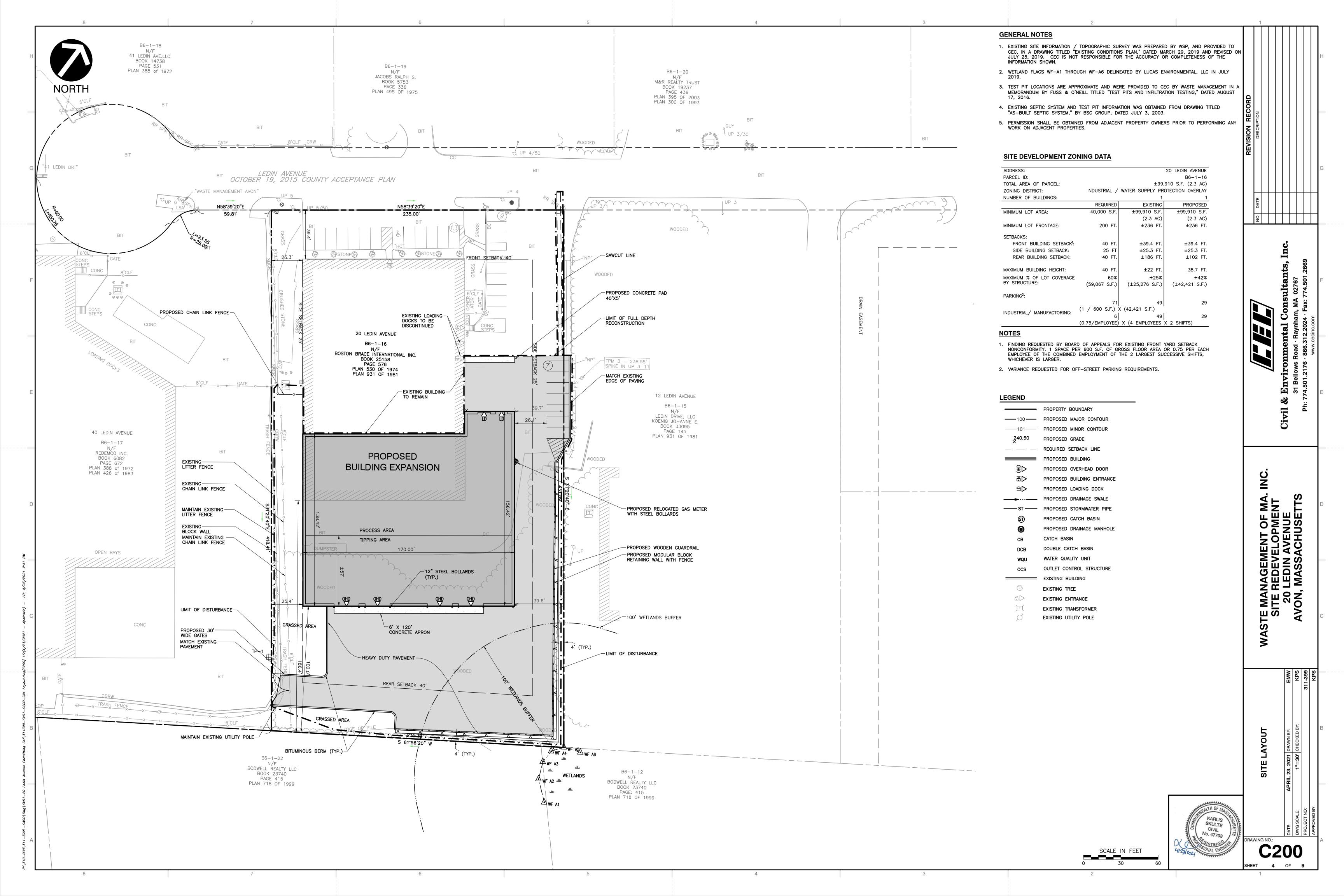
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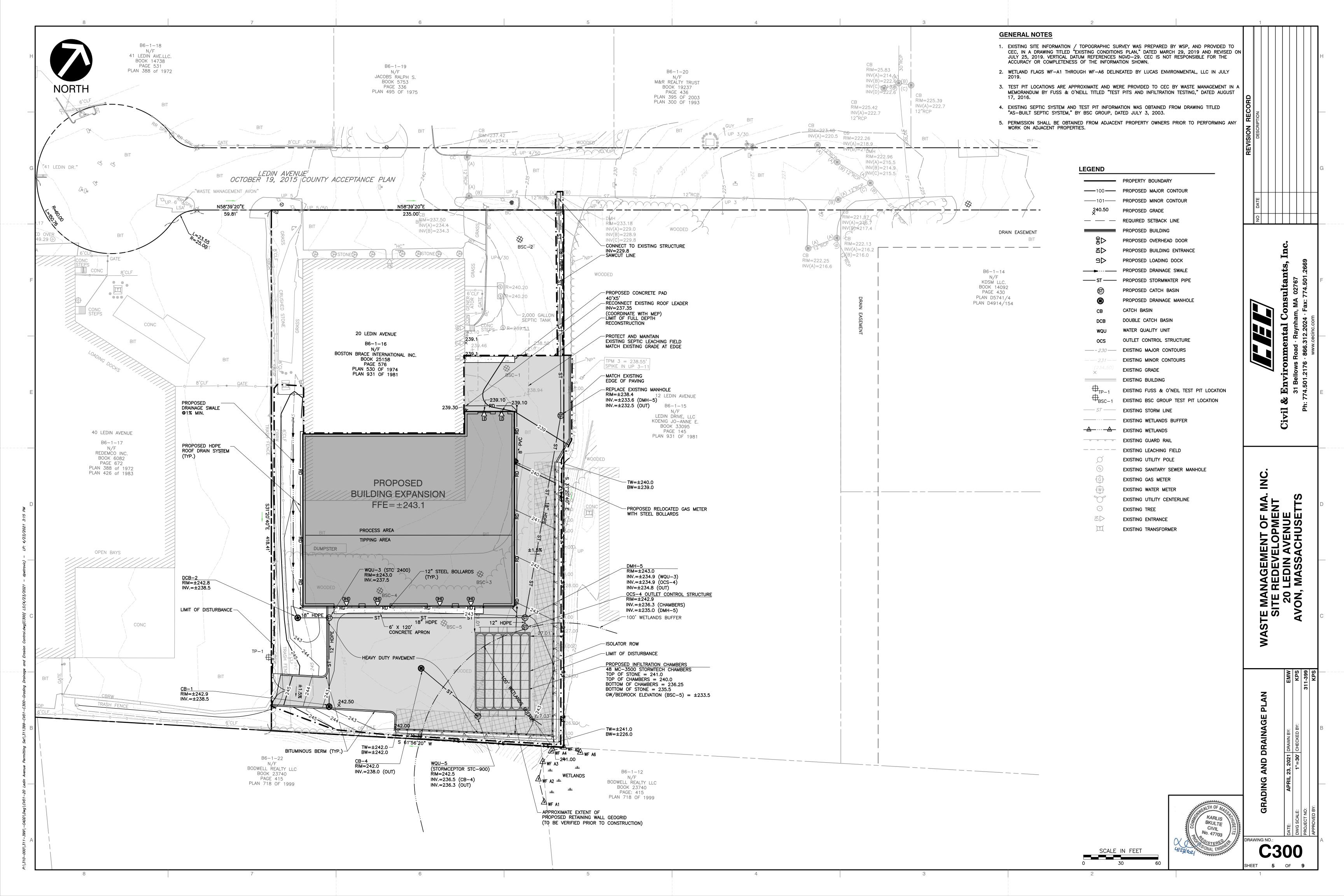


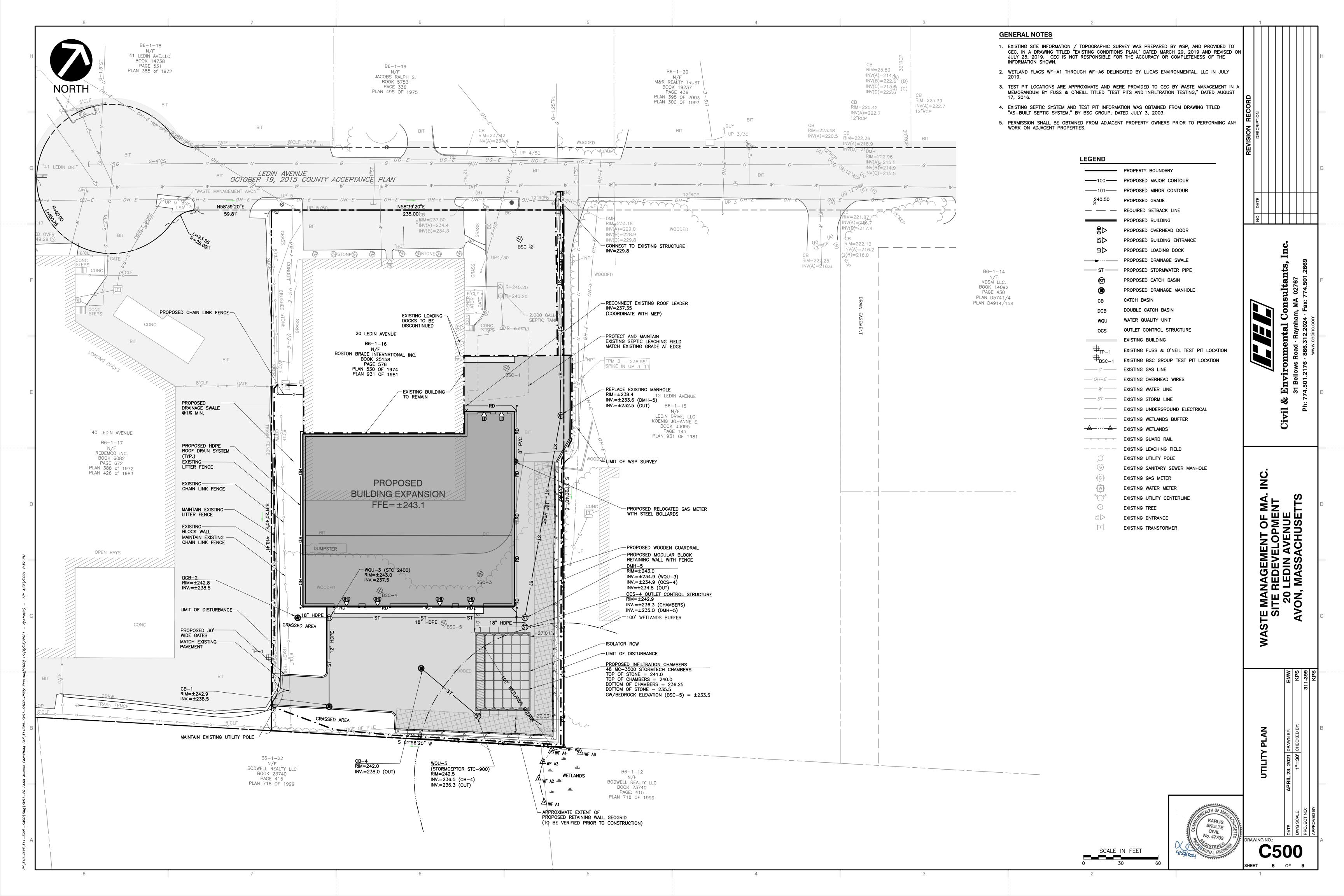


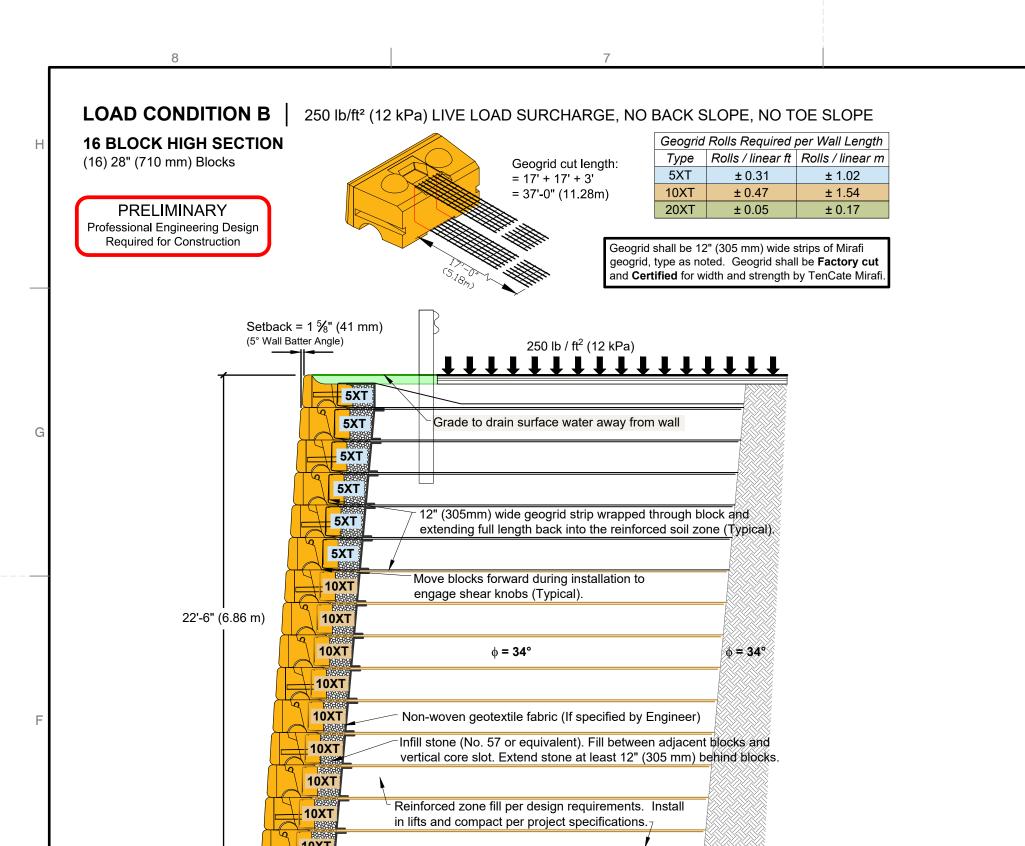
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### REDIROCK PC SYSTEM WALL

17'-0" (5.18m)

Drain (As specified by Engineer)

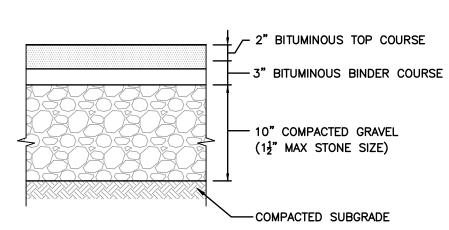
Leveling pad (as specified)

1. RETAINING WALL SHOWN IS FOR REFERENCE ONLY. FINAL RETAINING WALL IS TO BE DESIGNED BY STRUCTURAL ENGINEER.

N.T.S. #4 @ 16" BOTH WAYS TOP AND BOTTOM - ¾ CHAMFER BITUMINOUS CONCRETE PAVEMENT - 4000 PSI CEMENT CONCRETE (TYPE ||) COMPACTED SUBGRADE - COMPACTED

- 1. SIZE OF LOADING DOCK PAD TO BE AS INDICATED ON PLANS.
- 2. CONSTRUCTION JOINTS SHALL BE SPACED NO MORE THAN 40 FEET ON CENTER AND SHALL BE EQUALLY SPACED OVER THE LENGTH AND WIDTH OF THE PAD.
- 3. PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

#### LOADING DOCK PAD



#### **HEAVY DUTY FLEXIBLE PAVEMENT**

### CONSTRUCTION NOTES

1. PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

#### **BITUMINOUS CONCRETE PAVEMENT**

N.T.S.

# **BITUMINOUS CONCRETE BERM**

1. ALL CURBING TO BE MACHINE EXTRUDED.

CONSTRUCTION NOTES

2" RADIUS -

TACK COAT -

SEE BIT CONC PAVEMENT DETAIL —

-BIT CONC BERM

SURFACE TREATMENT

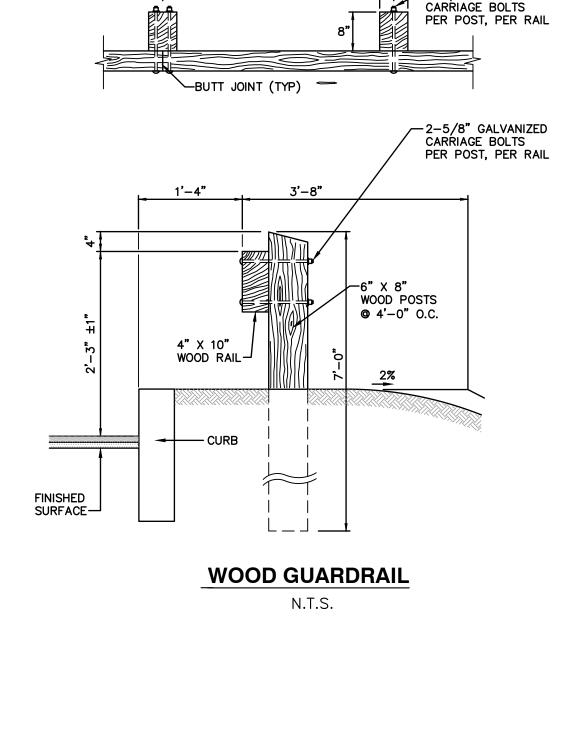
- COMPACTED GRAVEL

 $(1\frac{1}{2}$  MAX STONE SIZE)

- COMPACTED SUBGRADE

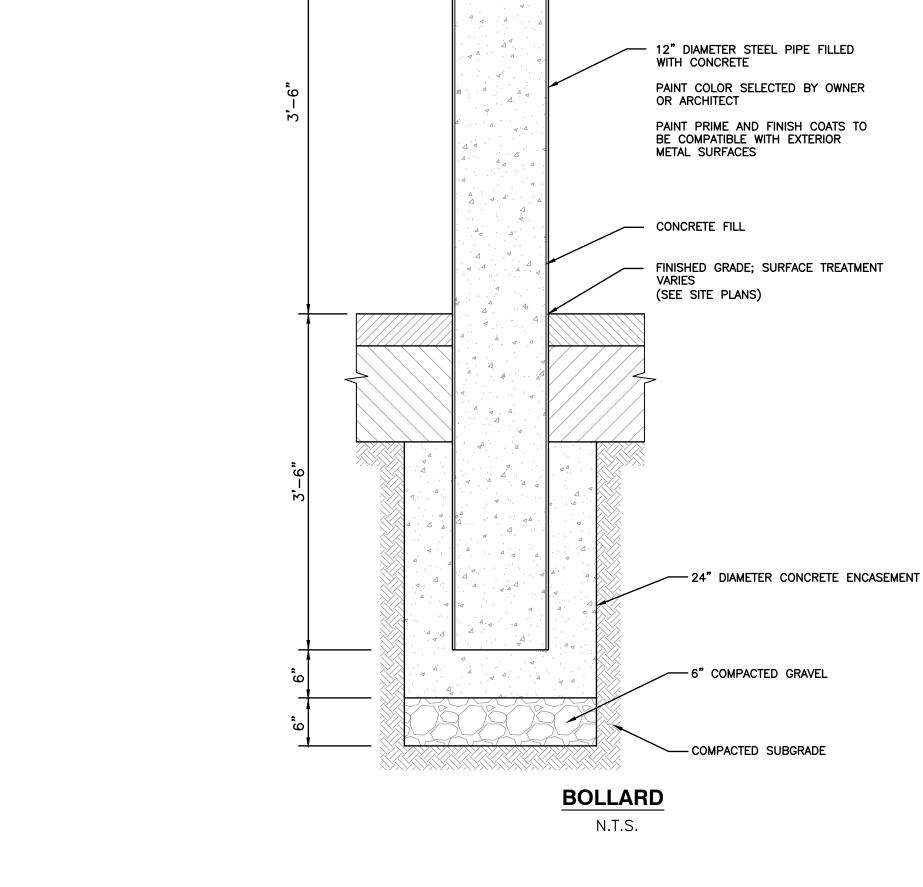
VARIES (SEE SITE PLANS)

−2" RADIUS

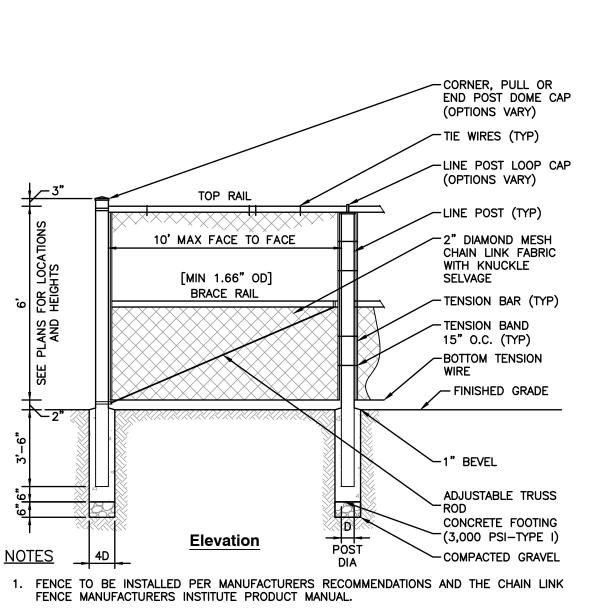


4'-0" O.C.

2-5/8" GALVANIZED



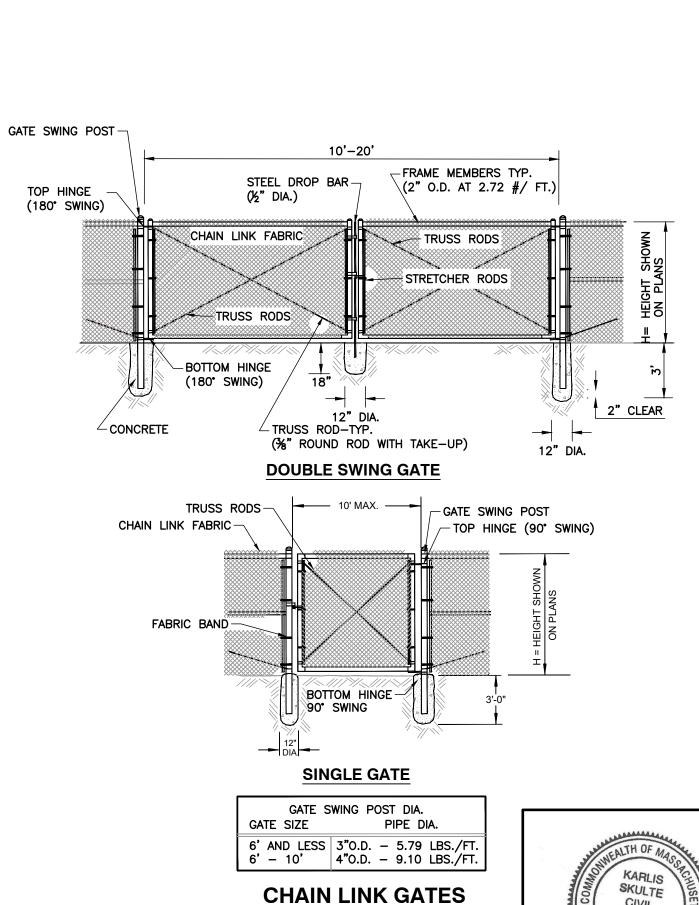
- ROUNDED CONCRETE CAP



- 2. POSTS SHALL MAINTAIN A MINIMUM DEPTH OF 3'-6" IN GROUND AND SHALL NOT BE RACKED TO ACCOMMODATE CHANGES IN GRADE.
- 3. LINE OF FENCE, TOP AND BOTTOM, SHALL BE INSTALLED STRAIGHT AND TRUE. POSTS SHALL BE INSTALLED PARALLEL AND PLUMB. RAILS SHALL BE INSTALLED PARALLEL TO GROUND SURFACE AND EACH OTHER.

#### 6' CHAIN LINK FENCE

N.T.S.



N.T.S.

SKULTE CIVIL

NAGEMENT OF MA REDEVELOPMENT LEDIN AVENUE I, MASSACHUSETT 'n S

En.

1'-6" (457 mm)

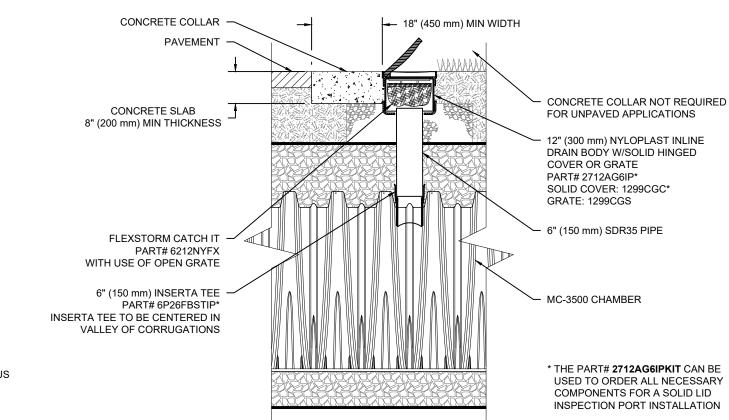
0'-6" (152 mm) -**‡** 

**CONSTRUCTION NOTES** 

#### **INSPECTION & MAINTENANCE**

- A. INSPECTION PORTS (IF PRESENT) REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3. B. ALL ISOLATOR ROWS B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
- B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
- ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
  - A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN . VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS. STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

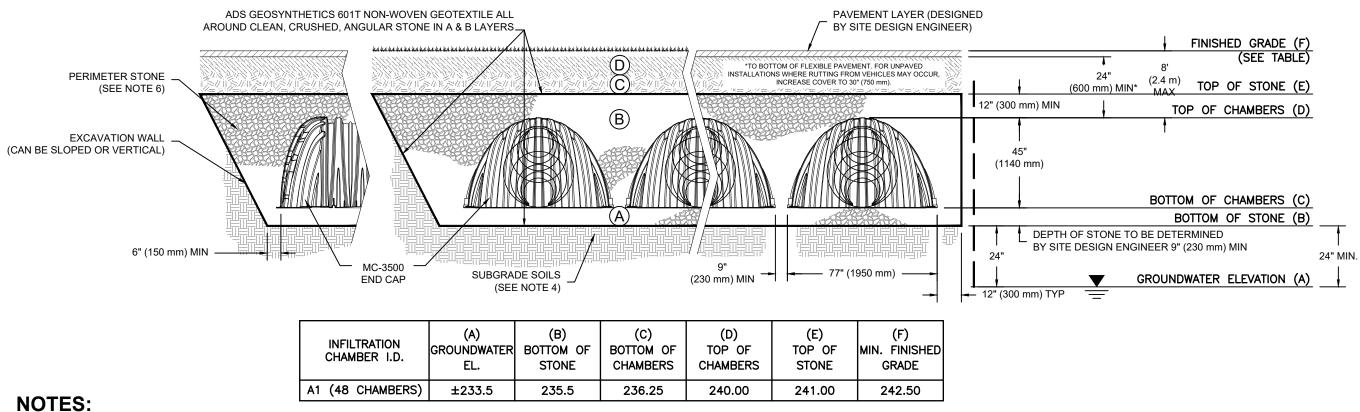


MC-3500 6" INSPECTION PORT DETAIL

#### ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL	COMPACTION / DENSITY
	MATERIAL LOCATION	DESCRIPTION	CLASSIFICATIONS	REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.  MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	OR	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 <sup>1</sup> 3, 4	NO COMPACTION REQUIR
А	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 <sup>1</sup> 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. 23

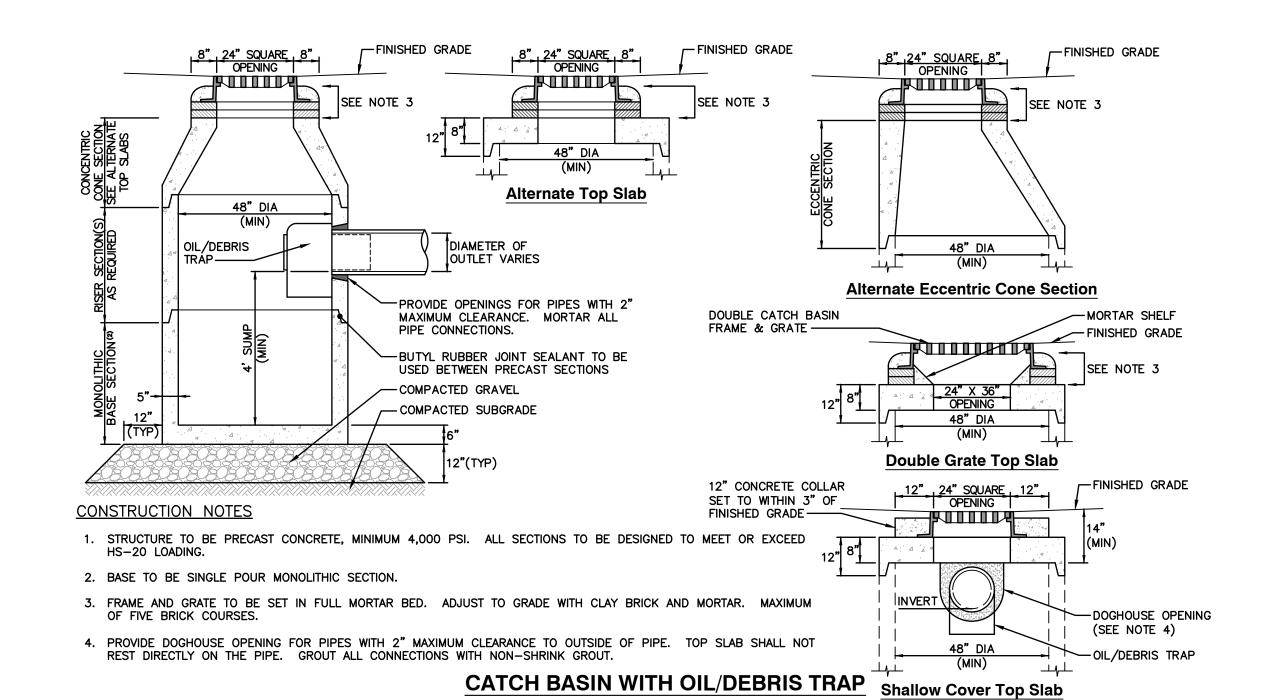
- PLEASE NOTE: 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE." ANGULAR NO. 4 (AASHTO M43) STONE".
- 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



#### NOTES:

- MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- 4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS. 5. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

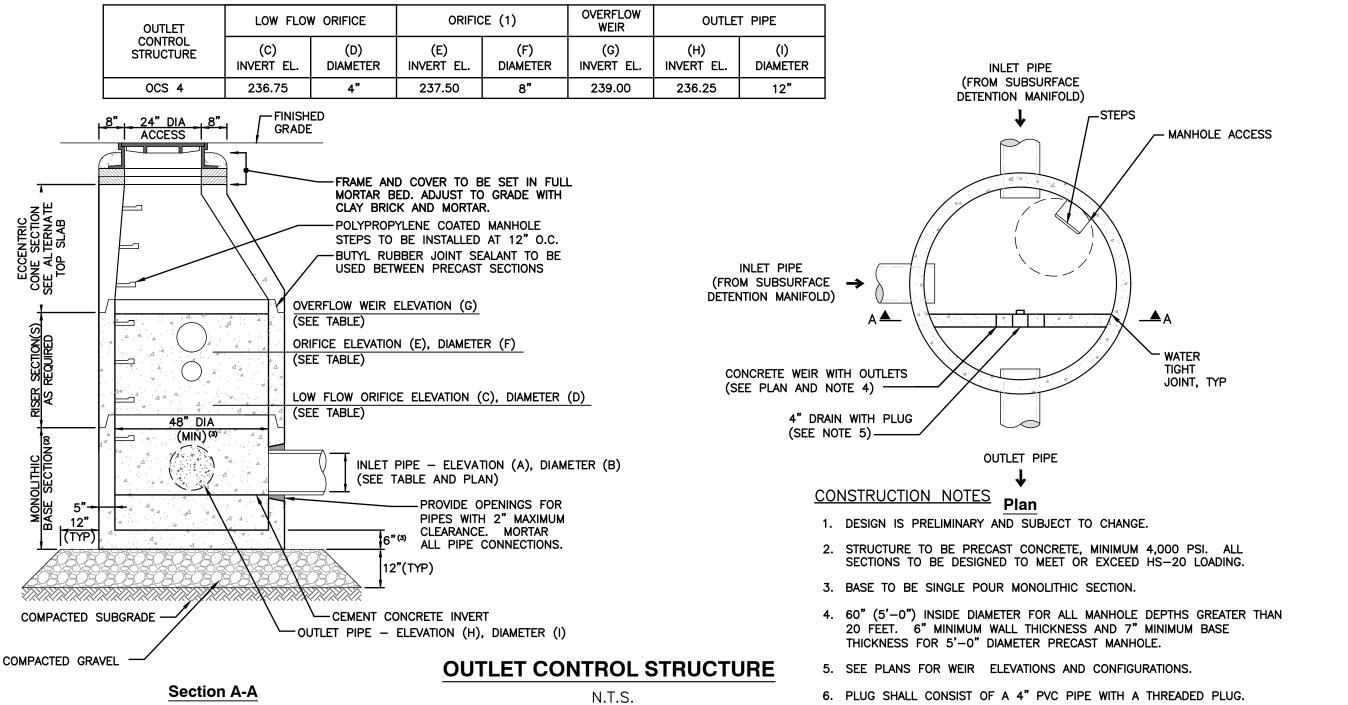
### STORMTECH MC 3500 TYPICAL DETAIL

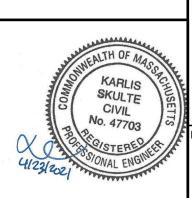


GRADE -FRAME AND COVER TO BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR. (MAXIMUM OF FIVE BRICK COURSES) -BUTYL RUBBER JOINT SEALANT TO BE USED BETWEEN PRECAST SECTIONS -POLYPROPYLENE COATED MANHOLE DIAMETER OF STEPS TO BE INSTALLED AT 12" O.C. ' inlet varies 🛶 -CONCRETE SHELF FORMED AT A SLOPE OF ONE INCH PER FOOT (1:12) OUTLET VARIES PROVIDE OPENINGS FOR PIPES WITH 2" MAXIMUM CLEARANCE. MORTAR ALL PIPE CONNECTIONS. COMPACTED SUBGRADE -- CEMENT CONCRETE INVERT **CONSTRUCTION NOTES** 

- 1. STRUCTURE TO BE PRECAST CONCRETE, MINIMUM 4,000 PSI. ALL SECTIONS TO BE
- DESIGNED TO MEET OR EXCEED HS-20 LOADING. 2. BASE TO BE SINGLE POUR MONOLITHIC SECTION.
- 3. 60" (5'-0") INSIDE DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET. 6" MINIMUM WALL THICKNESS AND 8" MINIMUM BASE THICKNESS FOR 5'-0" DIAMETER PRECAST MANHOLE.

#### **DRAIN MANHOLE**





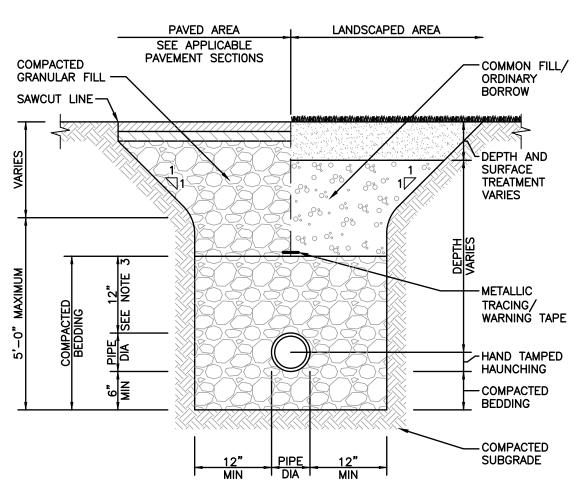
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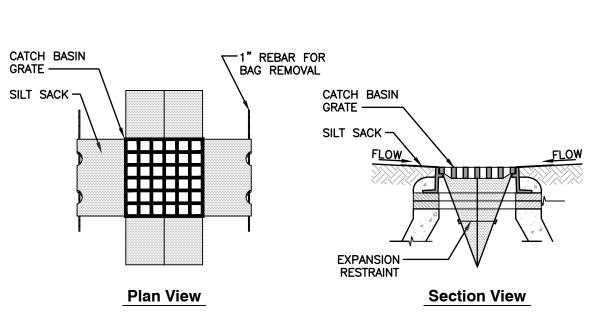


#### **CONSTRUCTION NOTES**

- 1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
- 2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.
- 3. FOR HIGH DENSITY POLYETHYLENE (HDPE) PIPE, DIMENSION IS 24 INCHES.

#### **UTILITY TRENCH**

N.T.S.

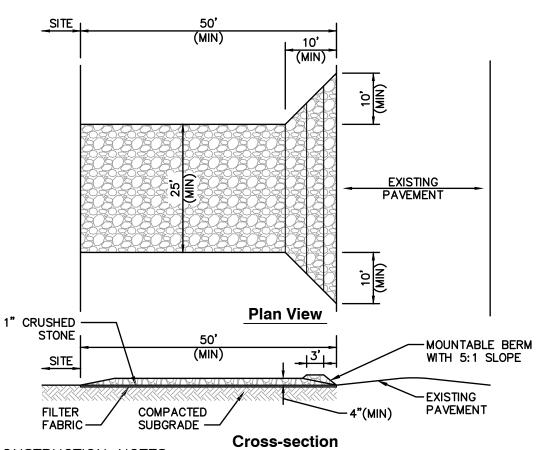


#### **CONSTRUCTION NOTES**

- 1. INSTALL SILT SACKS IN ALL CATCH BASINS WHERE INDICATED ON THE SITE PLANS BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER THE BINDER COURSE IS PLACED AND EROSION CONTROL BARRIERS HAVE BEEN REMOVED.
- 2. GRATE TO BE PLACED OVER SILT SACK.
- 3. SILT SACKS SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS. CLEANING OR REPLACEMENT SHALL BE PERFORMED AS NEEDED. MAINTAIN SILT SACKS UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.

#### SILT SACK INLET PROTECTION

N.T.S.

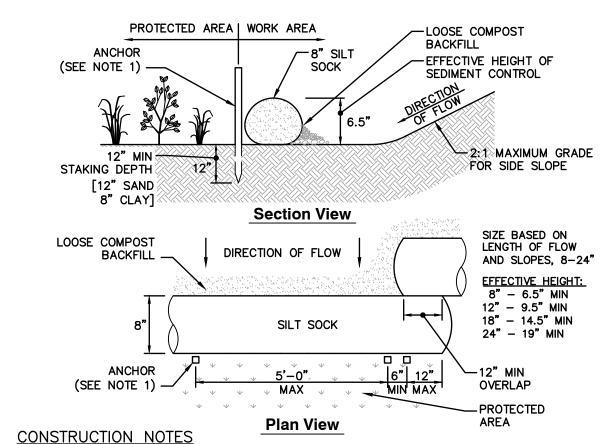


#### CONSTRUCTION NOTES

- 1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- 2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
- 3. STABILIZED CONSTRUCTION ENTRANCE SHALL BE REMOVED PRIOR TO FINAL FINISHED MATERIALS BEING INSTALLED.

#### STABILIZED CONSTRUCTION EXIT

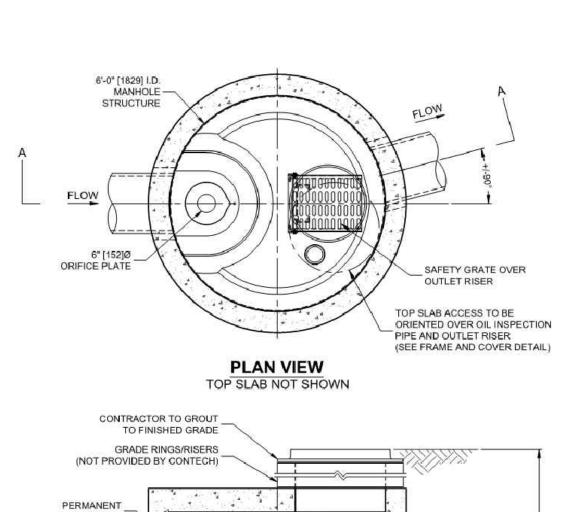
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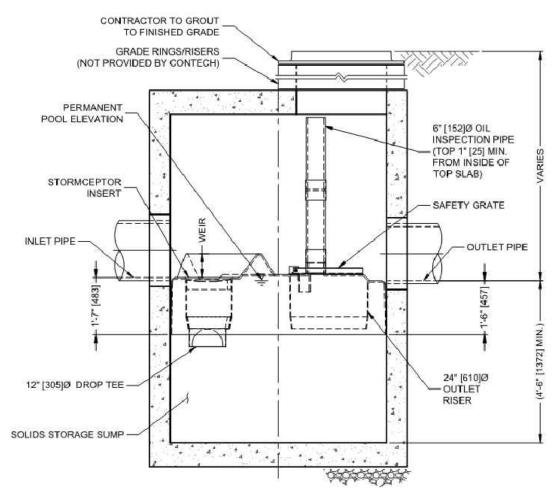


- 1. ANCHOR TO BE A 2" X 2" X 36" HARD WOOD STAKE, OR APPROVED EQUAL.
- 2. COMPOST FOR SILT SOCK FILL MATERIAL TO BE PROVIDED BY THE MANUFACTURER IN CONJUNCTION WITH THE ENGINEER TO PROVIDE THE REQUIRED REMOVAL OF SEDIMENT OR OTHER POLLUTANTS FROM RUNOFF.
- 3. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE LOCAL CONSERVATION AGENT OR THE DESIGN ENGINEER.
- 4. SILT SOCK SHALL BE INSPECTED PER LOCAL AND STATE REQUIREMENTS. REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY, AS NEEDED.
- 5. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.

#### SILT SOCK EROSION CONTROL BARRIER

N.T.S.

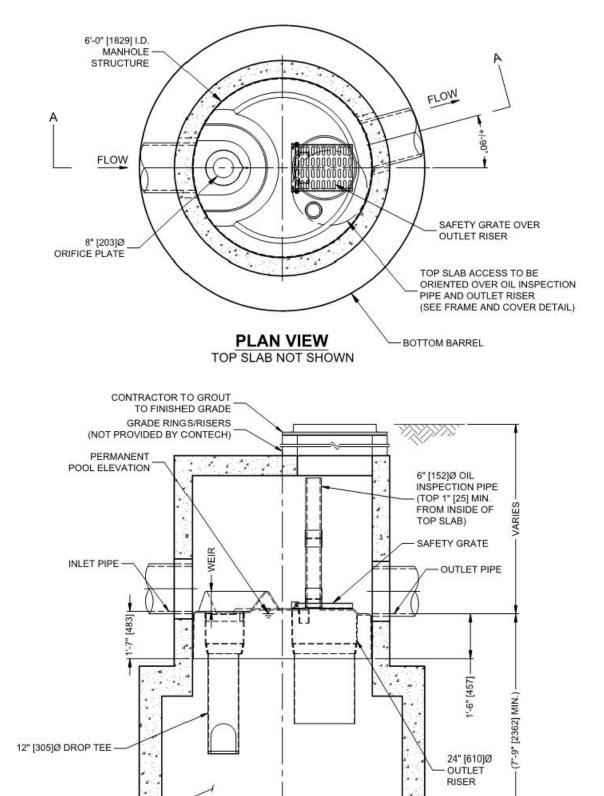


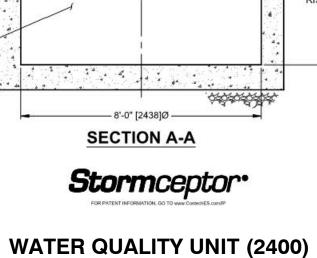


## **Storm**ceptor•

**SECTION A-A** 

**WATER QUALITY UNIT (900)** 





SOLIDS STORAGE SUMP -

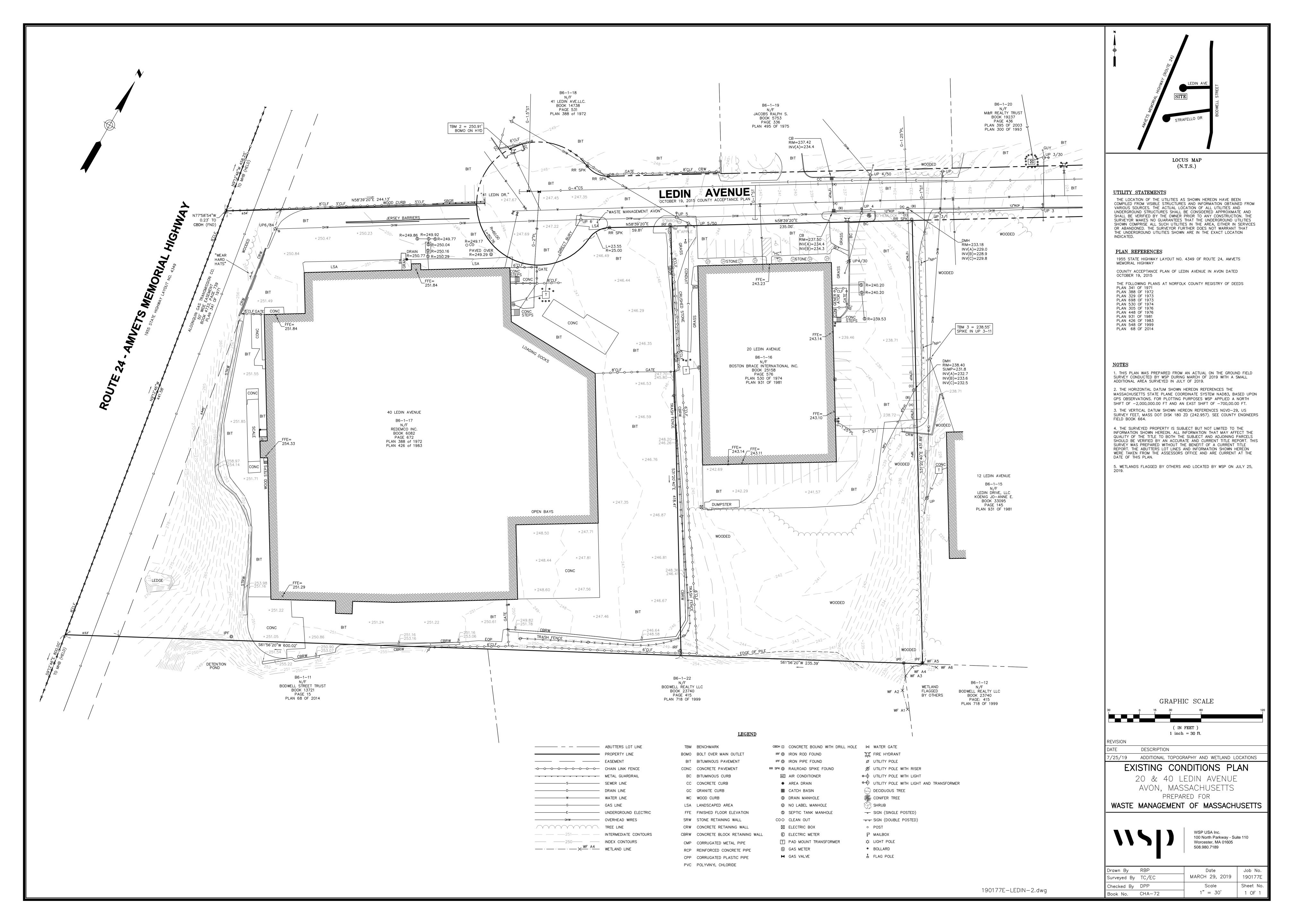
INJECTION MOLDED 45° OVERFLOW WYE 1'X1' CONCRETE 1. INJECTION MOLDED FITTINGS ARE AVAILABLE IN TEES, SPLASH BLOCK -WYES, REDUCERS, 45° BENDS AND BELL/BELL COUPLERS. (OR EQUIVALENT) NYLOPLAST CLEANOUT END WATERTIGHT (WT) JOINTS SHOWN. SOIL—TIGHT (ST) FITTINGS ARE ALSO AVAILABLE. ADJUST GRADE PER GRADING PLAN FINISHED GRADE DOWNSPOUT ADAPTER — -INJECTION MOLDED WT 45° BEND INSERT INJECTION MOLDED, GASKETED SPIGOT BY MOLDED WT BELL REDUCER INJECTION MOLDED WT CONNECTION -HDPE PIPE (TYP) INJECTION MOLDED HDPE TEE FITTING OR 90° ELBOW **ROOF DRAIN LEADER** 

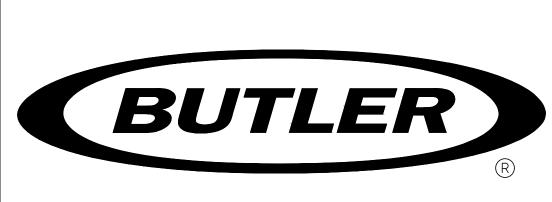
## GENERAL NOTES 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE. 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED WARM ContechES.com

- 3. STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT. 4. STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
- CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO. 5. STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].
- INSTALLATION NOTES

  A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES. E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

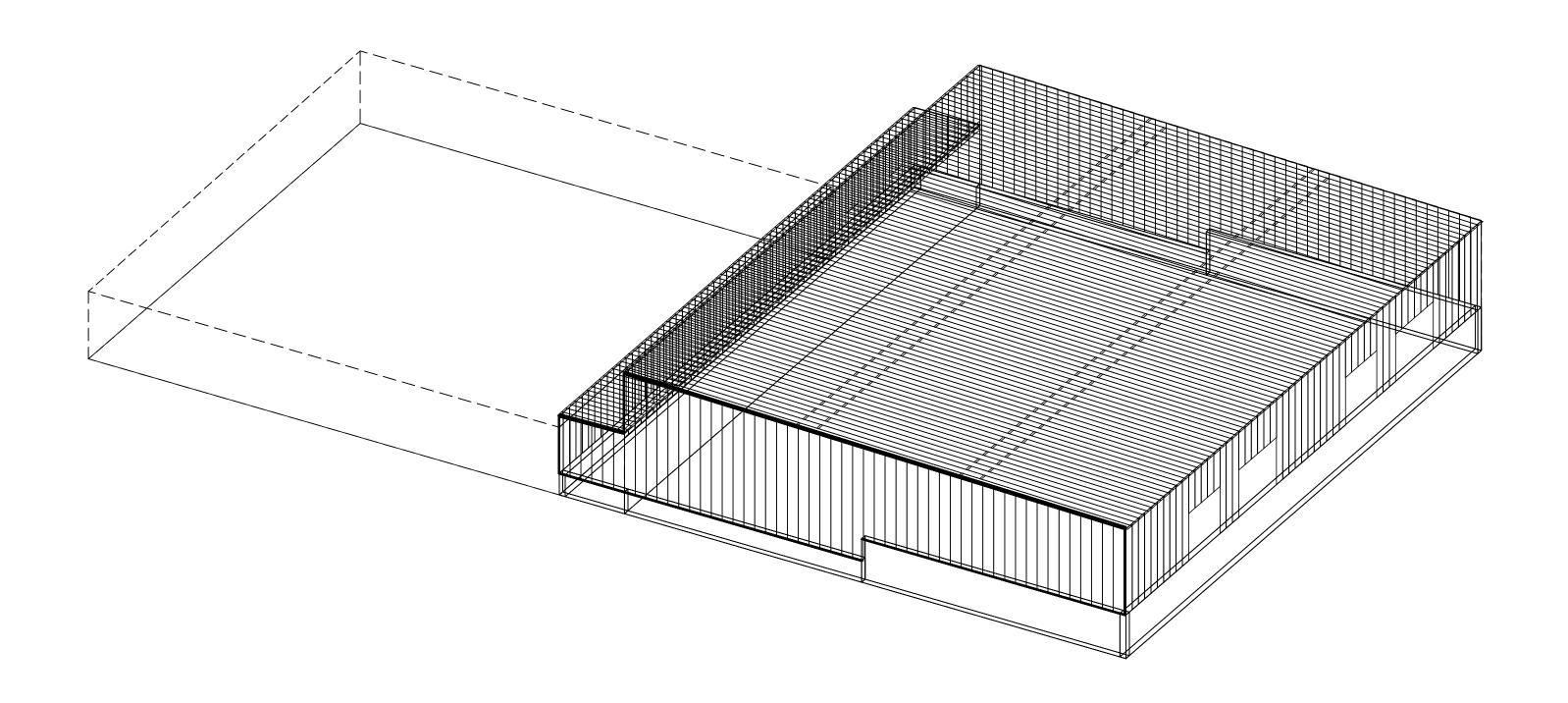
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**Butler Manufacturing** a division of BlueScope Buildings North America Inc.

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DRAWING TITLE	PAGES	TYPE	DATE	DESCRIPTION
COVER SHEET				
CODES AND LOADS				
NOTES				
ANCHOR ROD PLAN				
PRIMARY STRUCTURAL				
SECONDARY STRUCTURAL				
COVERING				
SPECIAL DRAWINGS				
STANDARD ERECTION DETAILS				
PLANOGRAPH DETAILS				



## **GENERAL NOTES**

#### **ASTM DESIGNATION**

**MATERIALS** A529, A572, A1011, A1018 **GRADE 55** 3 PLATE WELDED SECTIONS COLD FORMED LIGHT GAGE SHAPES A653, A1011 GRADE 60 GRADE 50 A572, A510 BRACE RODS HOT ROLLED MILL SHAPES A36, A529, A572, A588, A992 **GRADE 36 OR 50** A529, A572, A588, A992 GRADE 50 HOT ROLLED ANGLES HOLLOW STRUCTURAL SECTION (HSS) GRADE B CLADDING A653, A792 GRADE 50 OR GRADE 80

#### HIGH STRENGTH BOLT TIGHTENING REQUIREMENTS

IT IS THE RESPONSIBILITY OF THE ERECTOR TO ENSURE PROPER BOLT TIGHTNESS IN ACCORDANCE WITH APPLICABLE REGULATIONS. SEE RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS FOR MORE INFORMATION. SEE ERECTION GUIDE FOR BOLT TIGHTENING INSTRUCTIONS. THE FOLLOWING CRITERIA MAY BE USED TO DETERMINE THE BOLT TIGHTNESS (I.E.-SNUG TIGHT OR PRE-TENSION) UNLESS REQUIRED OTHERWISE BY LOCAL JURISDICTION OR CONTRACT.

ALL A490 BOLTS SHALL BE "PRE-TENSIONED". A325 BOLTS IN PRIMARY FRAMING AND BRACING CONNECTIONS MAY BE "SNUG-TIGHT" EXCEPT AS FOLLOWS;

PRE-TENSION A325 BOLTS IF BUILDING SUPPORTS A CRANE GREATER THAN 5 TON CAPACITY.

PRE-TENSION A325 BOLTS IF BUILDING SUPPORTS MACHINERY THAT CREATES VIBRATION, IMPACT, OR STRESS REVERSALS ON CONNECTIONS.

PRE-TENSION A325 BOLTS IF LOCATED IN HIGH SEISMIC AREAS. FOR IBC BASED CODES; HIGH SEISMIC IS DESIGN CATEGORY D, E OR F. SEE CODES AND LOADS SECTION BELOW FOR DETAILS.

PRE-TENSION ANY CONNECTION WITH DESIGNATION A325-SC. SLIP CRITICAL (SC) CONNECTIONS MUST BE FREE OF PAINT, OIL OR OTHER MATERIALS THAT REDUCE FRICTION AT CONTACT SURFACES. GALVANIZED OR LIGHTLY RUSTED SURFACES ARE ACCEPTABLE.

IN CANADA, ALL A325 AND A490 BOLTS SHALL BE "PRE-TENSIONED", EXCEPT FOR SECONDARY MEMBERS AND FLANGE BRACES.

SECONDARY MEMBERS AND FLANGE BRACE CONNECTIONS ARE ALWAYS "SNUG TIGHT", UNLESS INDICATED OTHERWISE IN **ERECTION DRAWING DETAILS.** 

#### **INSPECTION AND TESTING**

SPECIAL INSPECTIONS AND TESTING REQUIRED BY AUTHORITY HAVING JURISDICTION (AHJ) DURING CONSTRUCTION AND/OR STEEL FABRICATION IS THE RESPONSIBILITY OF THE OWNER OR OWNERS AUTHORIZED AGENT. WHEN REQUIRED, THE OWNER SHALL EMPLOY A QUALITY ASSURANCE AGENCY (QAA) APPROVED BY THE AHJ. THE BUILDER IS RESPONSIBLE TO COORDINATE BETWEEN THE QAA FIRM AND BEINANGABRICA 2006 FACTIONS AND NOT WELD TESTING MUST BE SPECIFICALLY EXTIPIOLO DE TIME CONTENT RESTONDE AND A TENTRE CONTENT A CONTENT Biγοην Εσεισμέτει (Control of the Control of the C Waste Management: Building Risk/Occupancy Category: II (Standard Occupancy Structure), Collateral Gravity: 7.00 psf (Not Including bldg wt) LIVE LOADS AND RAINFALL

Roof Live Load 20.00 psf (Not Reducible)

Rainfall: 0.10 inches per hour

CONCRETE FOUNDATIONS Compressive Strength (Min.) - f'c: 3000 psi

Ground Snow: 35.00 psf, Flat Roof Snow: 24.50 psf, Design Snow (Sloped): 24.50 psf, Specified Min. Roof Snow: 35.00 psf Snow Exposure Category (Factor): 2 Partially Exposed (1.00) Snow Importance: 1.000 Thermal Category (Factor): Heated (1.00)

The 'Envelope Procedure' is Used Wind Speed: Vult: 131.00 (Vasd: 101.47) mph, Wind Exposure: C Basic Wind Pressure: 33.19 psf Topographic Factor: 1.0000 Wind Enclosure: Enclosed, 0.180 Note: All windows, doors, skylights and other covered openings

must be designed for the specified above wind loads

#### EARTHQUAKE DESIGN DATA

Lateral Force Resisting Systems using Equivalent Force Procedure Mapped Spectral Response - Ss:19.60 %g, S1:6.50 %g Seismic Design Category: B (See Bolt Tightening Note Above) Seismic Snow Load: 0.00 psf Seismic Importance: 1.000 Soil Profile Type: Stiff soil (D) Design Spectral Response - Sds: 0.2091, Sd1: 0.1040

Ordinary Steel Moment Frames

Frame Redundancy Factor:1.00 Framing R-Factor: 3.00, Frame Seismic Factor (Cs): 0.0697, Design Base Shear = 0.0697 W Ordinary Steel Concentric Braced Frames

Brace Redundancy Factor: 1.00

Bracing R-Factor: 3.00, Brace Seismic Factor (Cs): 0.0697, Design Base Shear = 0.0697 W

THE BUTLER MFG. ENGINEER'S SEAL APPLIES ONLY TO THE WORK PRODUCT OF BUTLER MFG. AND DESIGN AND PERFORMANCE REQUIREMENTS SPECIFIED BY BUTLER. THE BUTLER MFG. ENGINEER'S SEAL DOES NOT APPLY TO THE PERFORMANCE OR DESIGN OF ANY OTHER PRODUCT OR COMPONENT FURNISHED BY BUTLER EXCEPT TO ANY DESIGN OR PERFORMANCE REQUIREMENTS SPECIFIED BY BUTLER.

THIS DRAWING, INCLUDING THE INFORMATION HEREON, REMAINS THE PROPERTY OF BUTLER MFG. IT IS PROVIDED SOLELY FOR ERECTING THE BUILDING DESCRIBED IN THE APPLICABLE PURCHASE ORDER AND MAY BE REPRODUCED ONLY FOR THAT PURPOSE. IT SHALL NOT BE MODIFIED, REPRODUCED OR USED FOR ANY OTHER PURPOSE WITHOUT PRIOR WRITTEN APPROVAL OF BUTLER MFG.

THE GENERAL CONTRACTOR AND/OR ERECTOR IS SOLELY RESPONSIBLE FOR ACCURATE GOOD QUALITY WORKMANSHIP IN ERECTING THIS BUILDING IN ACCORDANCE WITH THIS DRAWING, DETAILS REFERENCED IN THIS DRAWING, ALL APPLICABLE BUTLER MFG. ERECTION GUIDES, AND INDUSTRY STANDARDS PERTAINING TO PROPER ERECTION, INCLUDING THE CORRECT USE OF TEMPORARY BRACING.

**BUTLER MANUFACTURING** 1540 GENESSEE ST. KANSAS CITY, MO 64102

**COVER SHEET** 

JOB #: BUILDER: CWB Contractors Inc CUSTOMER: BUTLER LOCATION: Avon, Massachusetts PROJECT: Waste Management Butler Manufacturing BUILDER'S PO#: VPC VERSION: ADVNXT 4.3

Codes and Loads WHEN MULTIPLE BUILDINGS ARE INVOLVED, SPECIFIC LOAD FACTORS FOR DIFFERING OCCUPANCIES, BUILDING DIMENSIONS, HEIGHTS, FRAMING SYSTEMS, ROOF SLOPES, ETC., MAY RESULT IN DIFFERENT LOAD APPLICATION FACTORS THAN INDICATED BELOW. SEE CALCULATIONS FOR FURTHER DETAILS. WIND LOADS ARE APPLIED TO OVERALL BUILDING ENVELOPE. COMMON WALLS BETWEEN CONNECTED SHAPES ARE NOT SUBJECT TO EXTERNAL WIND LOADS.

County: Norfolk City: Avon State: Massachusetts

Building Code

Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Structural: 10AISC - ASD Rainfall: I: 0.10 inches per hour Cold Form: 12AISI - ASD f'c: 3000.00 psi Concrete

Dead and Collateral Loads Collateral Gravity:10.00 psf Collateral Uplift: 0.00 psf

Topographic Factor: Kzt: 1.0000

Wind Load Wind Speed: Vult: 131.00 (Vasd: 101.47) mph The 'Envelope Procedure' is Used Wind Exposure: C - Kz: 0.889 Parts Wind Exposure Factor: 0.889 Wind Enclosure: Enclosed

Building Code: 2015 International Building Code

NOT Windborne Debris Region Base Elevation: 0/0/0 Primary Zone Strip Width: 2a: 14/11/0 Parts / Portions Zone Strip Width: a: 7/5/8 Basic Wind Pressure: q: 33.19 psf

Material Dead Weight Roof Covering + Second. Dead Load: Varies

Obstructed or Not Slippery

Frame Weight (assumed for seismic):2.50 psf

Snow Load Ground Snow Load: pg: 35.00 psf Flat Roof Snow: pf: 24.50 psf Design Snow (Sloped): ps: 24.50 psf Rain Surcharge: 0.00 Specified Minimum Roof Snow: 35.00 psf (USR) Exposure Factor: 2 Partially Exposed - Ce: 1.00 Snow Importance: Is: 1.000 Thermal Factor: Heated - Ct: 1.00 Ground / Roof Conversion: 0.70

Roof Live Load

Roof Live Load: 20.00 psf Not Reducible

Country: United States

Seismic Load Lateral Force Resisting Systems using Equivalent Force Procedure Mapped MCE Acceleration: Ss: 19.60 %g Mapped MCE Acceleration: S1: 6.50 %g Site Class: Stiff soil (D) Seismic Importance: Ie: 1.000 Design Acceleration Parameter: Sds: 0.2091 Design Acceleration Parameter: Sd1: 0.1040 Seismic Design Category: B Seismic Snow Load: 0.00 psf % Snow Used in Seismic: 0.00 Diaphragm Condition: Flexible Fundamental Period Height Used: 19/3/14

Transverse Direction Parameters System NOT detailed for Seismic Redundancy Factor: Rho: 1.00 Fundamental Period: Ta: 0.2992 R-Factor: 3.00 Overstrength Factor: Omega: 2.50 Deflection Amplification Factor: Cd: 3.00 Base Shear: V: 0.0697 x W

System NOT detailed for Seismic Redundancy Factor: Rho: 1.00 Fundamental Period: Ta: 0.1843 R-Factor: 3.00 Overstrength Factor: Omega: 2.50 Deflection Amplification Factor: Cd: 3.00 Base Shear: V: 0.0697 x W

Longitudinal Direction Parameters

Waste Management Roof: A

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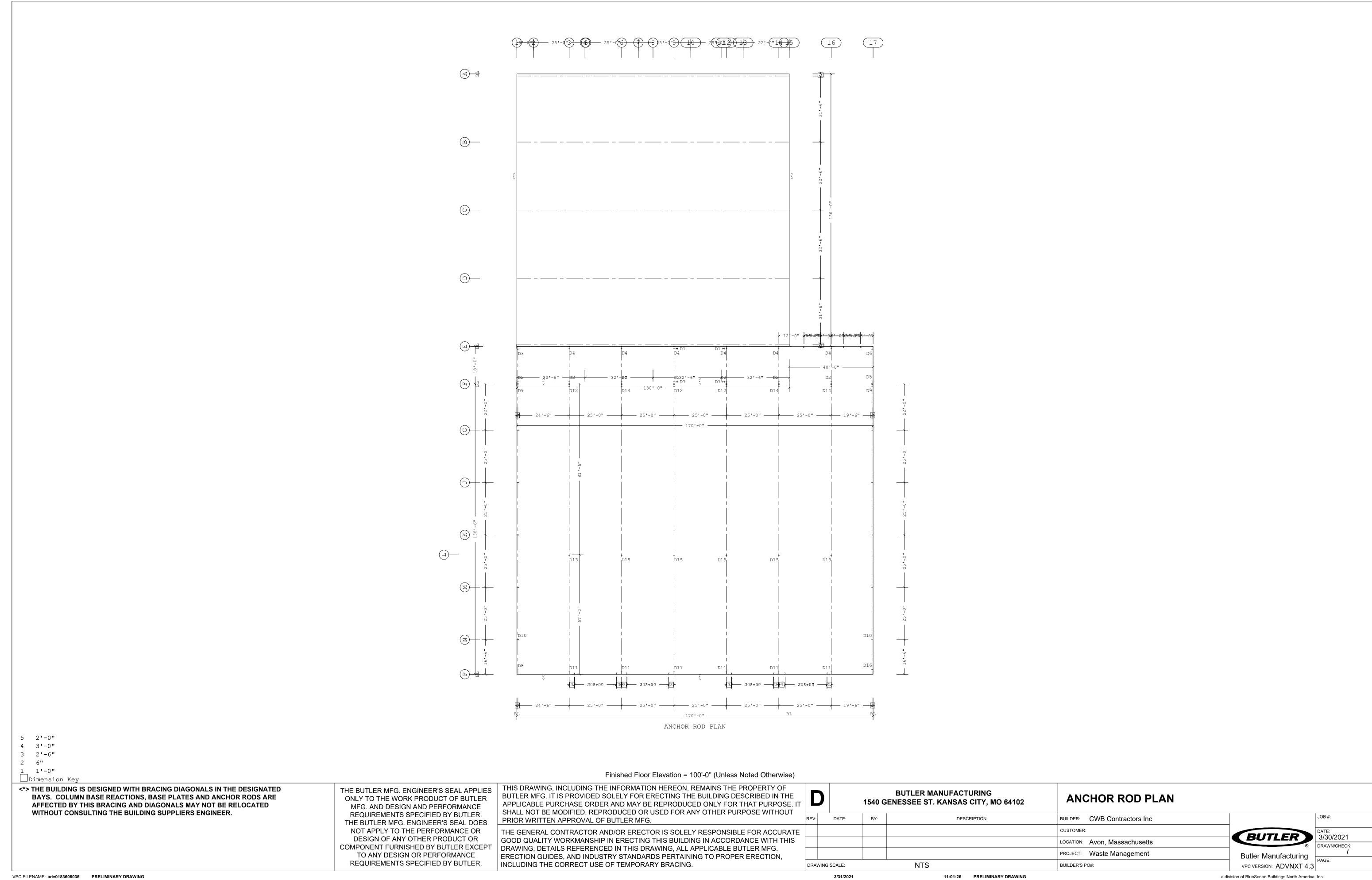
		_	ER MANUFACTURING EE ST. KANSAS CITY, MO 64102	COD	ES AND LOADS		
REV:	DATE:	BY:	DESCRIPTION:	BUILDER:	CWB Contractors Inc		JOB #:
				CUSTOMER:		BUTLER	DATE:
				LOCATION:	Avon, Massachusetts	(BUTLER)	3/30/2021 DRAWN/CHECK:
				PROJECT:	Waste Management	Butler Manufacturing	1
₹AW	ING SCALE:		NTS	BUILDER'S PC	D#:	VPC VERSION: ADVNXT 4.	PAGE.

Snow Buildup

Shape Surface Description Snow Load Bay Roof: A Snow Drift (from Wall 2, Shape Waste Management ) : Roof: A X Location Y Location Magnitude 170.0 ft 0.0 ft 79.1 psf 0.0 ft 0.0 ft 79.1 psf 0.0 ft 17.0 ft 0.0 psf 170.0 ft 17.0 ft 0.0 psf

- 1. The Snow Buildup loading shown is in addition to the flat or sloped roof snow.
- 2. The X and Y Location dimensions are from the point of origin of each surface.

VPC FILENAME: adv0183605035 PRELIMINARY DRAWING



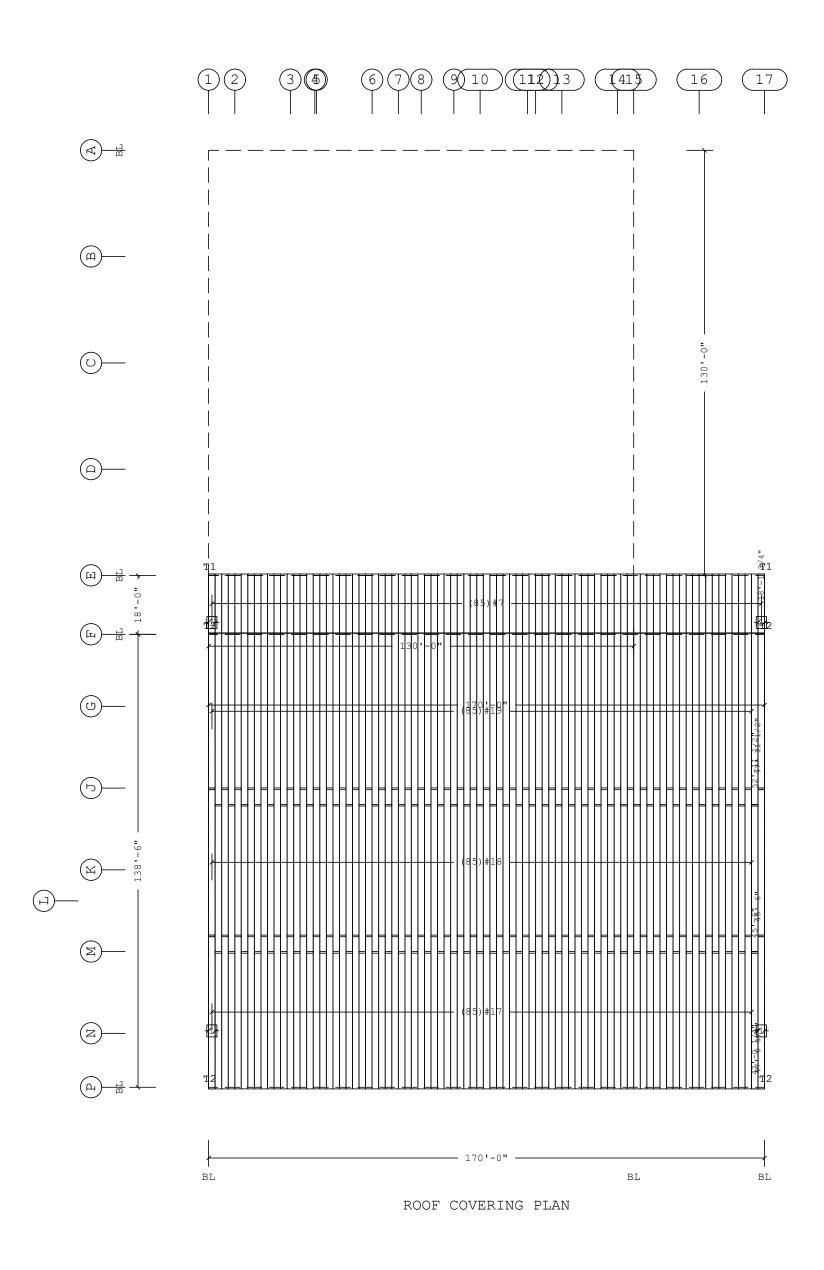
Covering Schedule

Id Qty Start Length Qty Stagger Length Type Gage OP Fin. Color #7 85 18'-1 3/4" MR24 24 40 Z AZ #17 43 47'-0 1/4" 42 42'-0 1/4" MR24 24 13 Z AZ #18 43 45'-6" 42 45'-6" MR24 24 10 Z AZ #19 43 47'-11 1/2" 42 52'-11 1/2" MR24 24 11 Z AZ Oper. Code:40=SQ,SQ Oper. Code:13=SQ,NT Oper. Code:11=SQ,SQ Finish:Z=AlZn

Color:AZ=Plain AlZn

Trim Schedule
Id Parts
T1 0630043
T2 0630043

Color Details
Match Wall Color
Match Wall Color



Planograph Schedule

Id Details

T1 P-080221, P-081236, P-103223, P-104542, P-104714

T2 P-080221, P-104549

Dimension Key

Shape Name = exisiting building , Shape = Snow Load Bay, Shape = Waste Management

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE'S AND/OR FASTENERS TO STRUCTURAL BEAMS

STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM.
 REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.
 DUE TO MANUFACTURING LIMITATIONS SHORT PANELS MAY REQUIRE
 FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS.
 SEE JOB DETAILS FOR COVERING AND TRIM FASTENER SPECIFICATION.

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MFG. AND DESIGN AND PERFORMANCE
REQUIREMENTS SPECIFIED BY BUTLER.
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COMPONENT FURNISHED BY BUTLER EXCEPT
TO ANY DESIGN OR PERFORMANCE

REQUIREMENTS SPECIFIED BY BUTLER.

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D		1540 GE	BUTLER MANUFACTURING NESSEE ST. KANSAS CITY, MO 64102	ROOF COVERING PLAN	
REV:	DATE:	BY:	DESCRIPTION:	BUILDER: CWB Contractors Inc	JOB #:
				CUSTOMER:	DATE:
				LOCATION: Avon, Massachusetts	BUTLER 3/30/2021  DRAWN/CHECK:
				PROJECT: Waste Management	Butler Manufacturing /
DRAWING	G SCALE:		NTS	BUILDER'S PO#:	VPC VERSION: ADVNXT 4.3
	2/24/2024		11:01:27 DDELIMINARY DRAWING	·	a division of PluoScopa Buildings North America, Inc.

Covering Schedule Id Qty Type Start Length Gage OP Fin. Color Increment Direction #9 22 SHP 32'-10 3/8" 26 1 K TD -3/4" Left to Right #10 25 SHP 25'-5 3/4" 26 1 K TD -3/4" Left to Right Oper. Code:1=SQ,SQ Finish:K=Butler-Cote

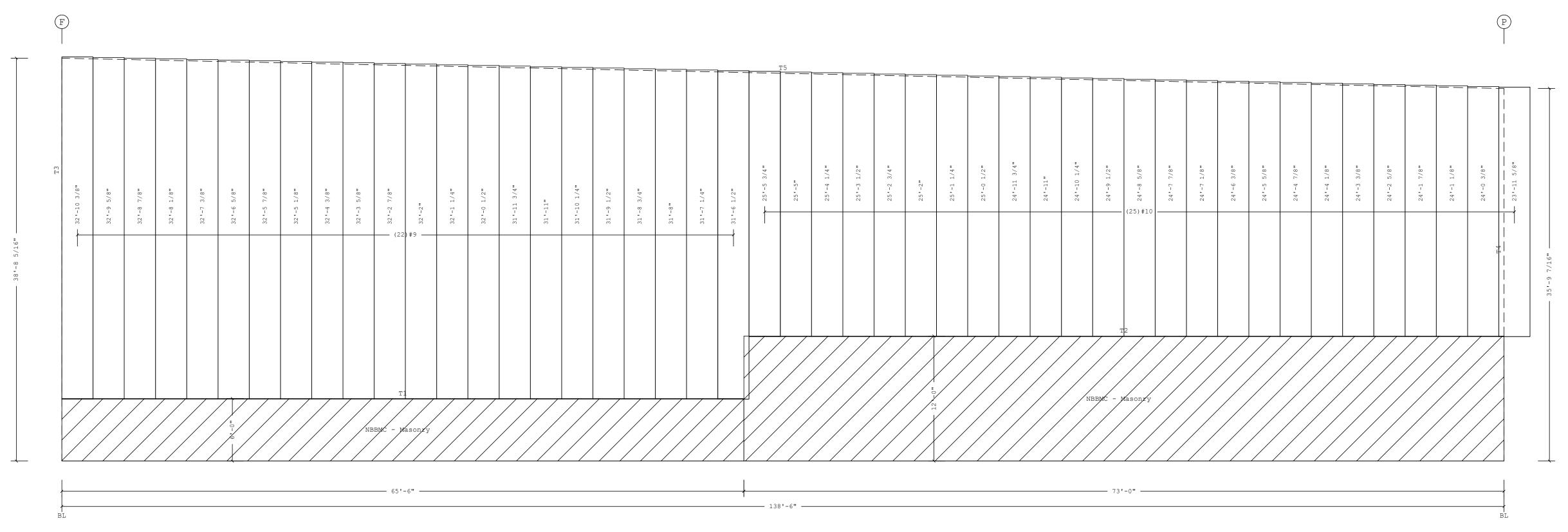
Color:TD=Standard Color

Trim Schedule Id Parts T1 (2.6) BA225, (5.5) BT12A

T2 (2.9) BA225, (6.1) BT12A T3 (2.5)0620163,(2)SHOCT12 T4 (2) 0570751, (2) 0620163, (2) SHOCT12 T5 (6.8) MRGT20R, (11.5) SHCL12, (13.6) WA10A Color Match Wall Color Match Wall Color Match Wall Color Match Wall Color Standard Color

KV441,KV442,PV167

Details ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 NV118, NV119, NV133, NV134 NV118,NV119,NV133,NV134



COVERING ELEVATION AT 1

Fastener Schedule

Part Description

0097364STD (T-1) 1/4-14 x 3/4", T-30 Torx Hd w/Washer Planograph Schedule

Id Details

T1 P-081180, P-081505 T2 P-081180, P-081505

T3 P-081180, P-081185

T4 P-081180, P-081185

T5 P-081167, P-081183, P-GAI

#### Shape Name = Waste Management , Wall = 1

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE'S AND/OR FASTENERS TO STRUCTURAL BEAMS 2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM.

REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED. 3. DUE TO MANUFACTURING LIMITATIONS SHORT PANELS MAY REQUIRE FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS. 4. SEE JOB DETAILS FOR COVERING AND TRIM FASTENER SPECIFICATION.

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REQUIREMENTS SPECIFIED BY BUTLER.

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D			BUTLER MANUFACTURING SENESSEE ST. KANSAS CITY, MO 64102	Waste Management -Covering	at 1
REV:	DATE:	BY:	DESCRIPTION:	BUILDER: CWB Contractors Inc	JOB #:
				CUSTOMER:	DATE:
				LOCATION: Avon, Massachusetts	BUTLER 3/30/2021  DRAWN/CHECK:
				PROJECT: Waste Management	Butler Manufacturing /
DRAWI	NING SCALE: NTS		NTS	BUILDER'S PO#:	VPC VERSION: ADVNXT 4.3

Covering Schedule

Id Qty Type Start Length Gage OP Fin. Color Increment Direction
#13 25 SHP 24'-0 1/4" 26 1 K TD 3/4" Left to Right
#14 22 SHP 31'-7 1/8" 26 1 K TD 3/4" Left to Right
Oper. Code:1=SQ,SQ
Finish:K=Butler-Cote
Color:TD=Standard Color

Trim Schedule

Id Parts
T1 (3)BA225,(6.2)BT12A

T2 (2.5)BA225, (5.3)BT12A T3 (4)0620163, (2)SHOCT12

T4 (6.8) MRGT20L, (11.5) SHCL12, (13.6) WA10A

Color

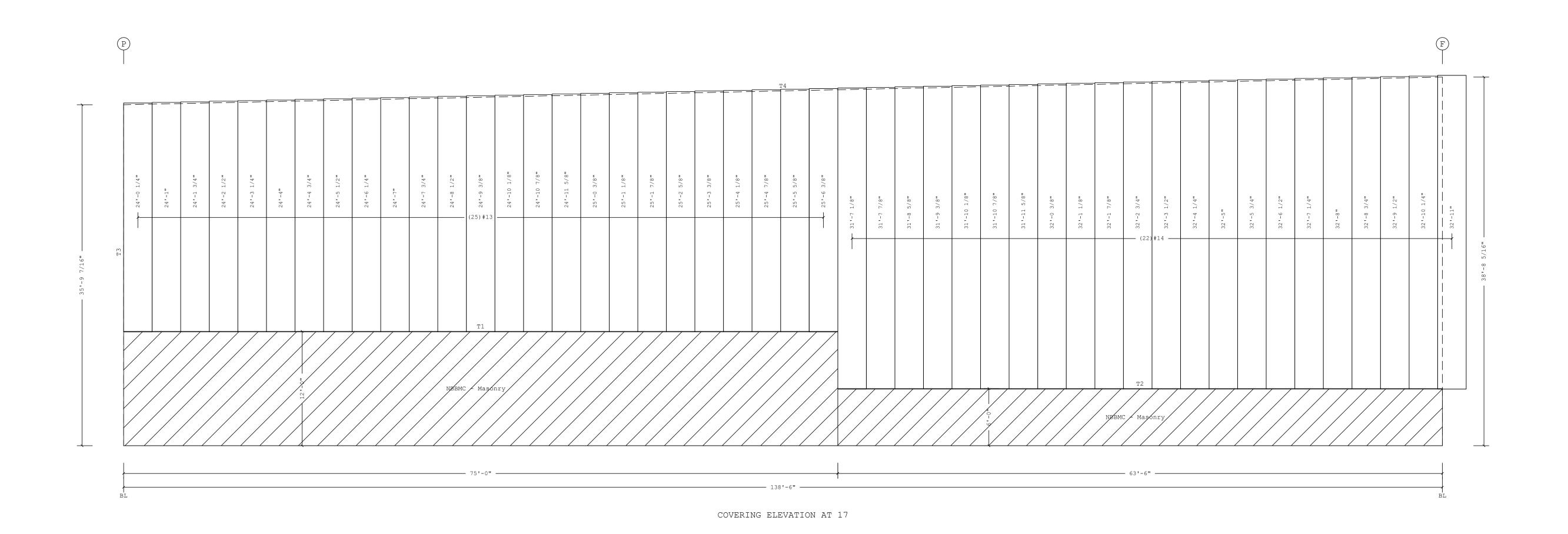
Match Wall Color Match Wall Color Match Wall Color

Standard Color

Details

ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 NV118, NV119, NV133, NV134

KV441,KV442,PV167



Fastener Schedule

Part Description

0097364STD (T-1)  $1/4-14 \times 3/4$ ", T-30 Torx Hd w/Washer

Planograph Schedule

Id Details

T1 P-081180, P-081505 T2 P-081180, P-081505

T3 P-081180, P-081185

T4 P-081167, P-081183, P-GAI

#### Shape Name = Waste Management , Wall = 3

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE'S AND/OR FASTENERS TO STRUCTURAL BEAMS

STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM.
 REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.
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 FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS.
 SEE JOB DETAILS FOR COVERING AND TRIM FASTENER SPECIFICATION.

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TO ANY DESIGN OR PERFORMANCE

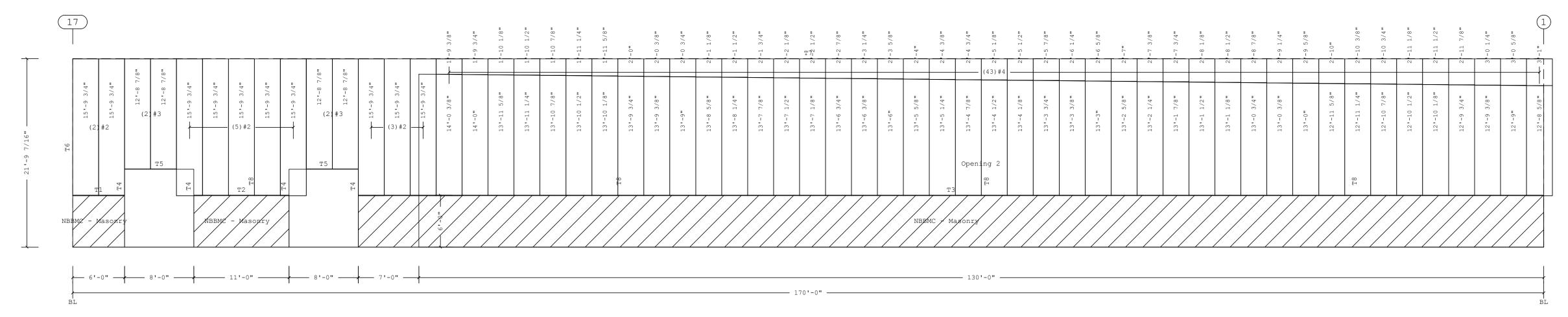
REQUIREMENTS SPECIFIED BY BUTLER.

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D		BUTLER MANUFACTURING 1540 GENESSEE ST. KANSAS CITY, MO 64102		$  M_{0000}   M_{00000}  $		at 17
REV:	DATE:	BY:	DESCRIPTION:	BUILDER: CWB Contractors Inc	JOB #:	
				CUSTOMER:	DATE:	
				LOCATION: Avon, Massachusetts	BUTLER  3/30/2021  DRAWN/CHECK:	
				PROJECT: Waste Management	Butler Manufacturing /	
DRAWI	IG SCALE:		NTS	BUILDER'S PO#:	VPC VERSION: ADVNXT 4.3	

Trim Schedule Covering Schedule Id Qty Type Start Length Gage OP Fin. Color Increment Direction Id Parts Color Details #2 10 SHP 15'-9 3/4" 26 1 K TD T1 (0.2) BA225, (0.5) BT12A Match Wall Color ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 Left to Right T2 (0.4) BA225, (0.9) BT12A #3 4 SHP 12'-8 7/8" 26 2 K TD Left to Right Match Wall Color ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 #4 43 SHP 1'-9 3/8" 26 2 K TD -3/8" Left to Right T3 (5.5) BA225, (11.4) BT12A Match Wall Color ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 Oper. Code:1=SQ,SQ T4 (0.2) DSF12C Match Wall Color NV568,NV569,WCB024,WCB025 T5 DGS12 NV125,NV140,NV566 Oper. Code:2=SQ,SQ Match Wall Color Finish:K=Butler-Cote T6 (2.5)0620163,(2)SHOCT12 Match Wall Color NV118,NV119,NV133,NV134 Color:TD=Standard Color T7 (15) CLE12D, (17) EA1021, (7) GTR25, (15) SHCL12 MV395,NV110,NV116,NV131 Standard Color T8 0008738, (2) 4CE45, 4CE75, (2.5) CP410 Match Wall Color KV846



COVERING ELEVATION AT E

Fastener Schedule

Part Description

0097364STD (T-1) 1/4-14 x 3/4", T-30 Torx Hd w/Washer Planograph Schedule

Id Details

T1 P-081180, P-081505

T2 P-081180, P-081505

T3 P-081180, P-081505

T4 P-081201, P-081202, P-081203

T5 P-081203

T6 P-081180, P-081185

T7 P-080221, P-080225, P-103223, P-103315, P-104714

T8 P-105224, P-105225, P-105228

#### Shape Name = Snow Load Bay, Wall = 2

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE'S AND/OR FASTENERS TO STRUCTURAL BEAMS 2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM. REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.

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REQUIREMENTS SPECIFIED BY BUTLER.

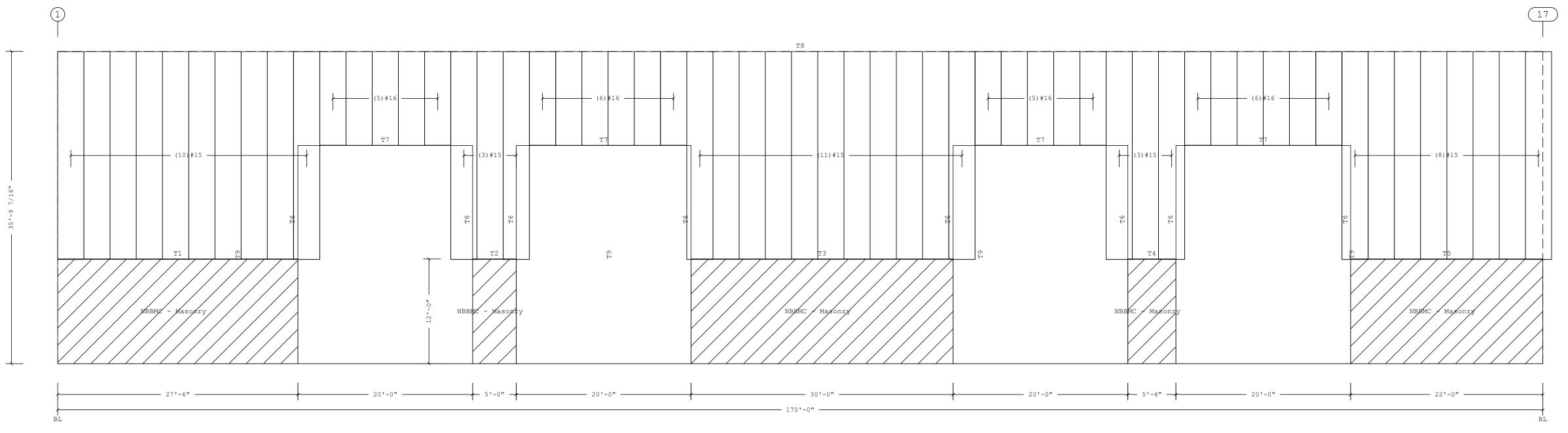
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D	BUTLER MANUFACTURING 1540 GENESSEE ST. KANSAS CITY, MO 64102		Snow Load Bay-Covering at	E
EV: DATE:	BY:	DESCRIPTION:	BUILDER: CWB Contractors Inc	JOB #:
			CUSTOMER:	DATE:
			LOCATION: Avon, Massachusetts	BUTLER 3/30/2021  BRAWN/CHECK:
			PROJECT: Waste Management	Butler Manufacturing /
RAWING SCALE:		NTS	BUILDER'S PO#:	VPC VERSION: ADVNXT 4.3

Covering Schedule Trim Schedule Id Qty Type Start Length Gage OP Fin. Color Direction Id Parts #15 35 SHP 23'-9 5/8" 26 1 K TD Left to Right T1 (1.1)BA225, (2.3)BT12A #16 22 SHP 10'-8 3/4" 26 2 K TD Left to Right T2 (0.2) BA225, (0.4) BT12A Oper. Code:1=SQ,SQ T3 (1.2) BA225, (2.5) BT12A Oper. Code:2=SQ,SQ T4 (0.2) BA225, (0.5) BT12A Finish:K=Butler-Cote T5 (0.9) BA225, (1.8) BT12A Color:TD=Standard Color T6 (1.1) DSF12C T7 (2) DGS12 T8 (15) CLE12D, (17) EA1021, (7) GTR25, (15) SHCL12 T9 0008738, (2) 4CE45, 4CE75, (4) CP410

Color Details Match Wall Color ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 Match Wall Color ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 Match Wall Color ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 Match Wall Color Match Wall Color ENB006, GV386, GV442, NV115, NV120, NV128, NV130, NV135, NV143, NV664, WCB082, WCB083, WCB084, WCB085, WCB086 Match Wall Color NV568,NV569,WCB024,WCB025 Match Wall Color NV125,NV140,NV566 Standard Color MV395, NV110, NV116, NV131 Match Wall Color KV846



COVERING ELEVATION AT P

Fastener Schedule

Part Description

0097364STD (T-1) 1/4-14 x 3/4", T-30 Torx Hd w/Washer Planograph Schedule

Id Details

T1 P-081180, P-081505 T2 P-081180, P-081505

T3 P-081180, P-081505

T4 P-081180, P-081505

T5 P-081180, P-081505

T6 P-081201, P-081202, P-081203

T7 P-081203

T8 P-080221, P-080225, P-103223, P-103315, P-104714

T9 P-105224, P-105225, P-105228

#### Shape Name = Waste Management , Wall = 4

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE'S AND/OR FASTENERS TO STRUCTURAL BEAMS 2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM.

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D	BUTLER MANUFACTURING 1540 GENESSEE ST. KANSAS CITY, MO 64102			Waste Management -Cove	ering at P
EV:	DATE:	BY:	DESCRIPTION:	BUILDER: CWB Contractors Inc	JOB #:
				CUSTOMER:	DATE:
				LOCATION: Avon, Massachusetts	BUTLER 3/30/2021  DRAWN/CHECK:
				PROJECT: Waste Management	Butler Manufacturing /
RAWING	SCALE:		NTS	BUILDER'S PO#:	VPC VERSION: ADVNXT 4.3