GROVE & DALL'OLIO A R C H I T E C T S PLLC

Addendum #1

To:	General Contractors	From:	Lisa Dall'Olio
Attn:	Estimating Departments	Pages:	3
Fax:		Date:	10-15-21
Re:	Claggett Center Barn		

The following information clarifies the information in the drawings dated 10/1/2021:

- 1. The pre-bid meeting was attended by 13 individuals. The sign-in sheet is attached for your review.
- 2. Are there any civil drawings? Is there additional information regarding the depths of the sewer lines.

Lisa pointed out that there is a sheet at the end of the Mechanical Drawings that shows the invert elevations of the manholes.

3. Where should excess fill be deposited?

The excess fill can be deposited on site. The Claggett Director will locate the areas to deposit the fill but it will not have to be hauled off site.

4. If the GC removed the current handicapped spot will there be a requirement to create a new spot?

No the Claggett Director will have one or two spots in the existing parking near the welcome center designated and signed as Handicapped spaces.

5. Will the GC be required to bring in the fire service line?

Yes, the GC will be required to bring in the service from the location of the existing hydrant by the circle. A fire pump will not be required.

- Will a roofing specification be provided? Yes, please see attached roofing specifications.
- 7. Is the Cupola to be made of aluminum?

Right now the drawings call for the cupula to be made of wood and clad with aluminum. Unless otherwise notified include this in your bids. Doug is exploring the possibility to have a sheet metal shop manufacture them entirely of aluminum.



8. Please clarify which kitchen equipment is to be provided and installed by the GC and which is to be provided and installed by the Owner.

The equipment specifications have been uploaded to the drop box folder and categorized in three folders. One is Supplied and installed by GC, the second is provided and Installed by Owner and the third is Provided by Owner installed by GC. The plan has also been revised to correspond with the letters.

9. Once the flooring is removed will it hold a 2-man scissor lift?

If the weight of the scissor lift is provided the design team will check.

10. What does General Conditions include?

It includes everything that does not belong in any other category.

- 11. The staging area will include the area shown on the attached plan. The construction zone will need to be surrounded with orange plastic construction fencing to delineate the limits and to keep young campers out.
- 12. Many of the trees around the building will be removed by the Owner prior to the construction.
- 13. The routing of sprinkler lines was discussed. Branch lines will need to reach up to within 12" below the peak for proper coverage. Lisa will work with the Structural Engineer to verify that the roof rafters can handle this additional weight. For the sake of bidding assume the main lines will run along the East and West walls and the roof will be able to hold the lines to cover the peak.
- 14. The Thyssen Krupp LULA elevator is no longer manaufactured. Please see attached revised LULA specification. The shaft dimensions have been adjusted to accommodate the switch. Please see attached revised basement plan.
- 15. The stones for the thresholds on the Stable level are to be supplied and installed by the GC. They are to be Indiana Limestone or Cathedral Stone and may be provided in two pieces if necessary.
- 16. The grass paver installation information for the ramp is attached.
- 17. The electrical outlets for the exterior wall are to be supplied by wiring/conduit that is channeled through the new insulative layers to feed outlet boxes that will sit flush with the historic siding on the interor. Once installed the gaps remaining must be filled with foam insulation.
- 18. No systems may be installed by boring through beams or timbers without explicit approval from Doug Reed.
- 19. Will engineered shoring plans be required?

Yes, signed and sealed engineered shoring plans will be required. DOUG?????

20. Will background checks be required?

No background checks will be required.

21. All existing lighting and electrical wiring/power is to be removed.

- 22. The Area within the barrel vault is erroneously referred to as a Storage Room on some of the plans. Please disregard. This is to be a conditioned meeting room.
- 23. For the ceiling of the stable level, wire brush and remove all loose material and apply Lancaster LimeWorks White Limewash (see attached Tech Data Sheet) as per the manufacturer's instructions. Add Lancaster Limeworks "Old Fashioned Casein" natural protein powder additive (see attached Tech Data Sheet) to promote durability.
- 24. The slab on the lower level is to be set flush with the sole remaining sill stone at door D105. This sets the ceiling height of the entire stable level. The floor to floor dimension then between the stable level and the wagon level is approximately 10'3 ¼" (approximate because the extent of shimming to get the flooring level is unknown). The ceiling height under beam lines 1C and 1D will be approximately 7'10".
- 25. There currently is Fiber for Internet at the adjacent Monocacy Hall. The GC will be required to bring this underground into the barn. For the sake of bididng, assume that the fiber is at the closest corner of Monocacy Hall. Exact location TBD.
- 26. The existing as-built site plans are attached for your use.
- 27. A storm window specification is attached for use with the existing stable level windows. At Door 101 a 1" insulated custom glass panel in a gasketed 2" wide white powder coated aluminum frame is to be installed.
- 28. The grass pavers at the ramp are to be Easy Pave 8100M Load Class A. Make surface of ramp an even smooth grade, install 2" of #57 gravel over landscape fabric, install the 2" tall interlocking grass paver units with two Easy Pave anchors per panel. Fill with screened topsoil and top with sod. The manufacturer's Data sheet and instructions are included with this addendum.
- 29. The thin real stone veneer for the new addition and cheek walls of ramp shall be Stoneyard Redwood Stacked stone. Redwood Stacked Stone Veneer is an irregular style ledgestone with a predominately split faced texture. It features a range of brown and rust colors with some light grey pieces. It is to be installed with a thin mortar joint.
- 30. The bottom edge of all exposed siding including above vent openings or at the bottom of the new rolling doors must be cut at an approximate 25° angle.
- 31. SIPS cannot be substituted for the EXPS on the walls.
- 32. Please include your wood siding and trim in Finish Carpentry division on your bid breakdown.
- 33. The ceiling of the kitchen is to receive drywall on the underside of the structure. 12" down from this an acoustical ceiling is to be installed. The ceiling of the bathrooms on the upper level is to be drywall. The 2 x 2 L-13 lay in fixtures are to be replaced by the same number of L-1 LED downlights rated for insulation contact. A revised ceiling plan is attached for your use.
- 34. Sheet A3.3 should show a mop sink in the Janitors Closet to correspond with the Plumbing Drawings.

END OF Addendum #1



T: 314-717-1551

EasyPave Grid

Product Data Sheet

Issue: 02.B34213 Date: 06.25.12 Page: 1 of 1

StructureRigid-walled, flexible semi-closed cell combinationPolymer100% recycled polyethylene (HDPE)Color Options(1)Black, Green and NaturalGrid Connection TypeOverlapping edge loop and cell connectionGrid Interlock TypeIntegral self locking snap-fit clipsDimensional CharacteristicsIntegral self locking snap-fit clipsPaver Size18" x 24"Installed Paver Size18" x 24"Height2.1"Ground Spike Length1.45"Weight3.4lbs/paverNominal Internal Cell SizeCastellated 2.6" Plaque & 1.8" Wave shapedCell Wall Thickness0.3" - 0.35"Open Cell %Top 92% / Base 75%Technical CharacteristicsLoad Bearing Capacity (Filled)< 367 tons/ yd²Crush Resistance (Unfilled)(2)CharacteristicsIntegral 1.35" long cross & 'T' section ground spikes (18 per paver)Chemical ResistanceFacult 1.35" long cross & 'T' section ground spikes (18 per paver)	Physical Properties	
Color Options(1)Black, Green and Natural Overlapping edge loop and cell connection Integral self locking snap-fit clipsGrid Interlock TypeIntegral self locking snap-fit clipsDimensional CharacteristicsI8" x 24"Paver SizeI8" x 24"Installed Paver SizeI8" x 24"Height2.1"Ground Spike Length1.45"Weight3.4lbs/paverNominal Internal Cell SizeCastellated 2.6" Plaque & 1.8" Wave shapedCell Wall Thickness0.3" - 0.35"Open Cell %Top 92% / Base 75%Technical Characteristics< 367 tons/ yd²	Structure	Rigid-walled, flexible semi-closed cell combination
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Cell Wall Thickness0.3" - 0.35"Open Cell %Top 92% / Base 75%Technical Characteristics-Load Bearing Capacity (Filled)< 367 tons/ yd²	Weight	3.4lbs/paver
Open Cell %Top 92% / Base 75%Technical Characteristics-Load Bearing Capacity (Filled)< 367 tons/ yd²	Nominal Internal Cell Size	Castellated 2.6" Plaque & 1.8" Wave shaped
Technical CharacteristicsLoad Bearing Capacity (Filled)< 367 tons/ yd²	Cell Wall Thickness	0.3" - 0.35"
Load Bearing Capacity (Filled)< 367 tons/ yd²Crush Resistance (Unfilled)(2)Basal Support & Anti ShearIntegral 1.35" long cross & 'T' section ground spikes (18 per paver)	Open Cell %	Top 92% / Base 75%
Load Bearing Capacity (Filled)< 367 tons/ yd²Crush Resistance (Unfilled)(2)Basal Support & Anti ShearIntegral 1.35" long cross & 'T' section ground spikes (18 per paver)		
Crush Resistance (Unfilled)(2)< 275 tonsBasal Support & Anti ShearIntegral 1.35" long cross & 'T' section ground spikes (18 per paver)	Technical Characteristics	
Basal Support & Anti Shear Integral 1.35" long cross & 'T' section ground spikes (18 per paver)	Load Bearing Capacity (Filled)	< 367 tons/ yd²
	Crush Resistance (Unfilled) (2)	< 275 tons
Chemical Resistance Excellent	Basal Support & Anti Shear	Integral 1.35" long cross & 'T' section ground spikes (18 per paver)
	Chemical Resistance	Excellent
UV Resistance High	UV Resistance	High
Toxicity Non Toxic	Toxicity	Non Toxic

Notes:

- (1) Green and Natural subject to minimum order requirements
- (2) Research carried out by Sheffield University UK Department of Mechanical Engineering. (Rennison/Allen March 2009)

As part of its continual improvement process, Standartpark. reserves the right to change the properties listed on this data sheet without prior notice.

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To whom it may concern -

In regards to our Easypave System - Detailed Specifications

Our Easypave system is derived from 100% Recycled HDPE Plastic and load class / design exceeds the industry standards.

- 80,000 LB load class per Sq Ft
- H20 Load capacity
- Dust free surface Dependent on aggregate fill Clean aggregate fill results in a 100% dust free surface when driving / parking on Easypave Grid.
- Approved for Fire Department Entrance ways every day parking / driving installations, single engine airports, and more.
- 100% Permeable surface after installed

The Easypave is considered the current staple in hard - all weather surfacing.

- Works as intended in up to 90F for the winter
- Works as intended in up to + 210F for the summer
- The HDPE used will not crack nor fade due to being UV resistant and its temperature loadings.

Our Easypave Grid is also fitted with our LilyPad Design stable bottom base

- No sinking / shifting into the ground
- No extra gravel / aggregate fill needed
- Backed by our lifetime warranty of the product.

If any questions are ever needing answered by us, regarding our #1 Rated Heavy Duty Permeable Paving System - Easypave - please do feel free to reach out to me personally

Martin Alan Chief Operating Officer Standartpark USA <u>m.alan@standartpark.com</u>



SECTION 076110

METAL ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Standing-seam galvalume roofing.
- B. Related Requirements:
 - 1. Section 061200 Insulated Panels
 - 2. Section 076200 Flashing and Sheet metal.
 - 3. Section 079000 Sealants.

1.2 COORDINATION

A. Coordinate roofing with rain drainage work, flashing, gutters, downspouts, trim and construction of decks, parapets, walls, and other adjoining work to provide permanently watertight, secure, and noncorrosive installation.

1.3 **PERFORMANCE REQUIREMENTS**

- A. Installation Requirements: Fabricator is responsible for installing system, including anchorage to substrate and necessary modifications to meet specified and drawn requirements and maintain visual design concepts in accordance with Contract Documents and following installation methods as stipulated in the "Architectural Sheet Metal Manual" handbook published by the Sheet Metal and Air Conditioning Contractors' National Association Inc. (SMACNA)
 - 1. Drawings are diagrammatic and are intended to establish basic dimension of units, sight lines, and profiles of units.
 - 2. Make modifications only to meet field conditions and to ensure fitting of system components.
 - 3. Obtain Architect's approval of modifications.
 - 4. Provide concealed fastening wherever possible.
 - 5. Attachment considerations: Account for site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening and fracturing connection between units and building structure or between components themselves.
 - 6. Accommodate building structure deflections in system connections to structure.
- B. Performance Requirements:
 - 1. System shall accommodate movement of components without buckling, failure of joint seals, undue stress on fasteners, or other detrimental effects when subjected to seasonal temperature changes and live loads.
 - 2. Design system capable of withstanding building code requirements for negative wind pressure.
- C. Interface With Adjacent Systems:
 - 1. Integrate design and connections with adjacent construction.
 - 2. Accommodate allowable tolerances and deflections for structural members in installation.

1.4 SUBMITTALS

- A. Shop drawings showing manner of forming, joining, and securing roofing, and pattern of seams. Show expansion joint details and waterproof connections to adjoining work and at obstructions and penetrations.
- B. Samples consisting of 6-inch (150 mm) or 12-inch (300 mm) square specimens of specified galvalume roofing material.
- C. Certificates: Fabricator's certification that products furnished for Project meets or exceeds specified requirements.

1.5 CLOSEOUT SUBMITTALS

A. Provide maintenance data in Operations and Maintenance manual for maintaining applied coatings on copper panels.

1.6 QUALITY ASSURANCE

- A. Fabricator's Qualifications: Company specializing in sheet metal roofing work with three years experience in similar size and type of installations.
- B. Installer: A firm with 3 years of successful experience with installation of roofing of type and scope equivalent to Work of this Section.
- C. Wind Uplift: Provide roof assemblies meeting wind uplift ratings as required by code.
- D. Mock-Up: Before proceeding with final purchase of materials and fabrication of roofing components, prepare a mock-up of work. Incorporate materials and methods of fabrication and installation identical with project requirements. Install mock-up at roof area location directed by Architect. Retain accepted mock-up as quality standard for acceptance of completed roofing. If accepted, mock-up may be incorporated as part of roofing work.
 - 1. Provide mock-up of sufficient size and scope to show typical pattern of seams, fastening details, edge construction, and finish texture and color.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Packing, Shipping, Handling, and Unloading: Protect finish panel faces.
- B. Acceptance at Site: Examine each panel and accessory as delivered and confirm that finish is undamaged. Do not accept or install damaged panels.
- C. Storage and Protection:
 - 1. Stack pre-formed material to prevent twisting, bending, and abrasions.
 - 2. Provide ventilation.
 - 3. Prevent contact with materials which may cause discoloration or staining.

1.8 WARRANTY

- A. Warrant installed system and components to be free from defects in material and workmanship for period of 2 years.
- B. Include coverage against leakage and damages to finishes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide materials by one of the following:
 - 1. ATAS International, Inc.
 - 2. McElroy Metal.
 - 3. Approved Equal.

2.2 MATERIALS

- A. Galvalume Roofing Sheets: Cold-rolled copper sheet complying with ASTM B370 temper H00, unless otherwise indicated, and as follows:
 - 1. Gage: 24 gage unless otherwise indicated.
- B. Miscellaneous Materials: Provide materials and types of fasteners, solder, protective coatings, separators, sealants and accessory items as recommended by SMACNA for roofing work, except as otherwise indicated.
- C. Accessories: Except as indicated as work of another specification Section, provide components required for a complete roof system, including trim, copings, fascias, ridge closures, cleats, seam covers, flashings, gutters, louvers, sealants, gaskets, and closure strips. Match materials and finishes of roof.
 - 1. Cleats
 - a. Concealed type as indicated in the SMACNA handbook for standing seam spaced on 12 inch (300 mm) centers.
 - b. Fabricate cleats to allow thermal movement of roof panels while preventing panel distortion due to wind uplift forces.
 - 2. Trim, Closure Pieces, and Accessories:
 - a. Same material, thickness and finish as adjacent roof panels, brake formed to required profiles.
 - b. Comply with standards conforming to recognized industry standard sheet metal practice.
- D. Screws: 1-1/4" #10 Metal to wood stainless steel type 304 pancake head screws.
- E. Cleats: 24 gage, as required to sustain loads 2-inch (50 mm) wide x 3-inch (75 mm) long.

2.3 FABRICATION

- A. General Metal Fabrication: Comply with details shown and with applicable requirements of the "Architectural Sheet Metal Manual" handbook and other recognized industry practices. Fabricate for waterproof and weather-resistant performance with expansion provisions for running work, sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrate. Comply with material manufacturer's instructions and recommendations for forming material. Form exposed galvalume work without excessive oil-canning, buckling, and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.
 - 1. Fabricate to allow for adjustments in field for proper anchoring and joining.
 - 2. Form sections true to shape, accurate in size, square, free from distortion and defects.
 - 3. Cleats: Fabricate cleats and starter strips of same material as sheet, interlockable with sheet in accordance with SMACNA recommendations.

- 4. Standing Seam Panels:
 - a. Fabricate pans to interlock standing seam with 18" center to center seam spacing as indicated on Drawings.
 - b. Fabricate interlocking seams to 1" height.
 - c. Form overlapping and interlocking transverse joints.
- B. Seams: Fabricate nonmoving seams in galvalume sheet with flat-lock seams.
- C. Separations: Provide for separation of copper from noncompatible metal or corrosive substrate by coating concealed surfaces at locations of contact, with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.

2.4 FINISHES

A. Galvalume. No applied finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. General: Examine conditions and proceed with work when substrates are ready.
- B. Confirm that substrate system is even, smooth, sound, clean, dry, and free from defects.
- C. Verify roof openings, pipes, sleeves, ducts, and vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.

3.2 PREPARATION

A. Clean surfaces to receive roofing. Substrate to be smooth and free of defects. Drive all projecting nails or other fasteners flush with substrate.

3.3 INSTALLATION

- A. Manufacturer's Recommendations: Except as otherwise shown or specified, comply with recommendations and instructions of manufacturer of copper being fabricated and installed.
- B. General:
 - 1. Form and fabricate sheets, seams, strips, cleats, valleys, ridges, edge treatments, integral flashings, and other components of copper roofing to profiles, patterns, and drainage arrangements shown and as required for permanently leakproof construction. Provide for thermal expansion and contraction of the work, as indicated. Seal joints as shown and as required for leakproof construction. Shop-fabricate materials to greatest extent possible.
 - 2. Fabricate and install work with lines and corners of exposed units true and accurate. Form exposed faces flat and free of buckles, excessive waves, and avoidable tool marks considering temper and reflectivity of metal. Provide uniform, neat seams with minimum exposure of solder, and sealant. Except as otherwise shown, fold back sheet metal to form a hem on concealed side of exposed edges.
 - 3. Conceal fasteners and expansion provisions where possible in exposed work, and locate so as to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- C. Standing Seam Roofing:
 - 1. Fold lower end of each pan under 3/4 inch (19 mm). Slit fold one inch (25 mm) away from corner to form tab where pan turns up to make standing seam. Fold upper end of each pan over 2 inches (50 mm). Hook fold on lower end of upper pan into fold on upper end of underlying pan.

- 2. Apply pans beginning at eaves. Loose lock pans to valley flashing and edge strips at eaves and gable rakes.
- 3. Finish standing seams one inch (25 mm) high. Bend up one side edge 1-1/2 inch (38 mm) [2 inch (50mm)] and other 1-3/4 inch (44 mm) [2-1/4 (66mm)]. Make first fold 1/4 inch (6 mm) wide single fold and second fold 1/2 inch (13 mm) wide, providing locked portion of standing seam with 5 plies in thickness. Fold lower ends of seams at eaves over at 45 degree angle. Terminate standing seams at ridge and hips by turning down in tapered fold.
- 4. Form valleys of sheets not exceeding 10'-0" (3000 mm) in length. Lap joints 8 inches (200 mm) in direction of drainage. Extend valley sheet minimum 6 inches (150 mm) under roofing sheets. At valley, double fold valley and roofing sheets and secure with cleats spaced 12 inch (300 mm) centers.
- D. Coordinate installation of panels with adjacent construction to ensure watertight enclosure.

3.4 CLEANING

A. Remove protective film (if any) from exposed surfaces of roofing promptly upon installation. Strip with care to avoid damage to finishes.

3.5 **PROTECTION**

A. Provide final protection in a manner acceptable to installer that ensures that roofing is without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 08581 CUSTOM STORM WINDOWS

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Historic One Lite (HOL) removable panel storm windows for exterior mounted.

1.2 RELATED SECTIONS

- A. Section 07900 Sealants.
- B. Section 085550 Historic Wood Window and Vent Restoration
- C. Section 088000 Glass and Glazing.

1.3 REFERENCES

- A. AAMA 611 Voluntary Specification for Anodized Architectural Aluminum; 1998.
- B. AAMA 2603 Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels; 1998.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Show dimensions, layout, profiles and product components; details of anchoring and fastening; sealants and weatherstripping; and recorded field measurements.
- D. Finish Samples: Submit color samples, for approval by Architect, that represent the allowable range of finish established from production material specified.
- E. Component Samples: Submit samples of anchors, fasteners, hardware, assembled corner sections and other materials and components.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - 1. Store inside, if possible, in a clean, well-drained area free of dust and corrosive fumes.
 - 2. Stack vertically or on edge so that water cannot accumulate on or within materials. Use non-staining wood or plastic shims between components to provide water drainage and air circulation.
 - 3. Cover materials with tarpaulins or plastic hung on frames to provide air circulation.
 - 4. Keep water away from stored assemblies.

5.

1.6 WARRANTY

A. Manufacturer's Warranty: Submit warranty against defects in materials and workmanship for period of 5 years from the date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Allied Window, Inc.; 11111 Canal Road, Cincinnati, OH 45241.
 ASD. Tel Toll Free: (800) 445-5411, Tel. (513) 559-1212; Fax: (513) 559-1883. Email: csales@alliedwindow.com; Website: www.alliedwindow.com.
- B. Approved Equal

2.2 STORM WINDOWS

- A. General: Provide Allied Window Custom "Invisible" Storm Windows that fit existing windows without gaps of more than 1/8 inch (3 mm) in each unit.
 - 1. Verify actual measurements of openings by field measurement before fabrication; show recorded measurements on shop drawings.
 - 2. Allow for out-of-square and irregular conditions.
 - 3. Verify frame and sill conditions of each opening before fabrication; provide appropriate fabrication details to suit existing conditions.
- B. Historic One Lite (HOL) Removable Panel Storm Windows: Exterior mounted, aluminum framed removable panel(s) in aluminum master frame; panels removable to interior, without hardware on outside.
 - 1. Frame and Sash Sightline: 2-1/8 inch (54 mm) maximum.
 - 2. Frame Thickness: 3/8 inch (9.5 mm).
 - 3. Style: Single removable panel (HOL-A).
 - 4. Removable Panels: Easily removable, held in place with cam-action clips providing positive seal between master frame and panel frame; with full width bottom rail lift handle.
 - 5. Approved by National Park Service for historic structures.

2.3 COMPONENTS

- A. Master Frame and Panel and Sash Frame Members: Extruded aluminum with wall thickness not less than 0.062 inches (1.6 mm); miter corners and join with corner keys.
 - 1. Aluminum: 6063-T5 alloy and temper with minimum ultimate strength of 22,000 psi (152 MPa) and yield strength of 16,000 psi (110 MPa).
 - 2. Corner Keys: Extruded aluminum.
 - 3. Sill Expander: Where necessary to fit existing sloping sill, provide H-shaped member below master frame with weep holes.
 - 4. Finish: Clear anodized finish (201-R1).
 - 5. Finish: Baked acrylic enamel, complying with AAMA 2603, electrostatically applied; 15 year warranty.
 - a. Color: White.
- B. Fasteners: Stainless steel.
- C. Hardware: Nylon or zinc die-cast. Include Allied "Invisible" clips that sit flush with the face of the frame.

- D. Glass Type: Annealed glass.
- E. Type: Tempered float glass, ASTM C1048, quality Q3.
 - 1. Standard Glazing:
 - a. Thickness: 1/8 inch (3 mm).
- F. Glazing Gaskets: Removable and reusable virgin vinyl glazing splines with neatly mitered corners.
- G. Sill Expander shall be H type with minimum wall thickness of .062" and .125" web thickness, and modified to permit weepage.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions fastened securely in a straight, plumb and level condition without distortion of the windows. Provide exterior storm windows with high quality Mylar foam tape at the head and jambs to make caulking unnecessary, and provide for future removal.

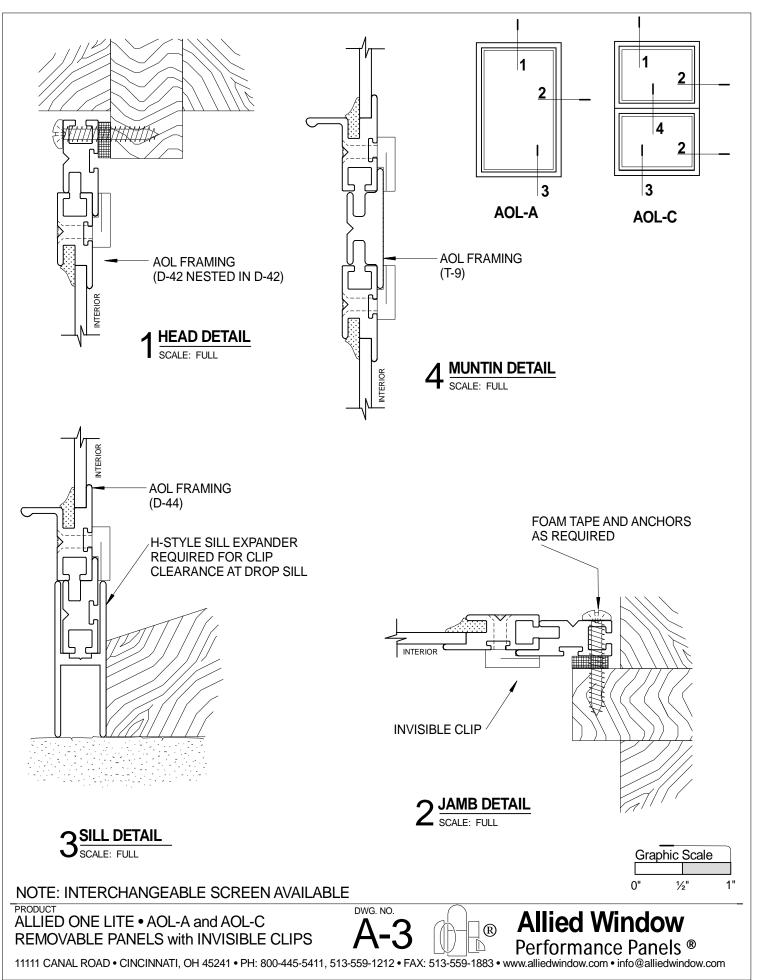
3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.5 WARRANTY

A. Manufacturer shall provide a five (5) year warranty against faulty materials, paint and workmanship.

Protect installed products END OF SECTION





Old Fashioned Casein

Product Name: Old Fashioned Casein

Manufacturer:

Lancaster Lime Works 1251 Beaver Valley Pike Willow Street, PA 17603 717.207.7014 http://lancasterlimeworks.com

Product Description:

Lancaster Lime Works Old Fashioned Casein is a natural protein polymer blend containing high quality casein (milk protein) prepared for use in our Lime Wash applications. It is a dry powder that is cream to tan in color. Protein content is 84% Fat content is 2% PH is 4

Designed to replace historic casein that was used in milk paints, etc.

Basic Use:

Lancaster Lime Works Old Fashioned Casein can be added to our Lime Wash to help promote durability in high traffic areas, to help prevent "chalking" and add durability. This type of casein was used as a helping binder in old fashioned milk paint recipes.

Mixing: There are a multitude of "historic" recipes that call for casein mixed with lime and other ingredients. This is only a suggestion of one use and no warranties or guaranties are made by Lancaster Lime Works regarding an "exact" recipe and how our Old Fashioned Casein is used.

Old Fashioned Casein should be pre-mixed with cold clean water prior to adding to Lime Wash. Add water to the dry casein at a ratio of **one part casein: two parts of cold water**. Let this admixture soak with gentle stirring until thoroughly wetted, usually allowing 12 hours of soaking before use.

After the casein has soaked, add enough limewash to allow it to totally desolve into a "slimy glue-like" consistency, usually 2 cups of limewash per 2 lbs of casein. The high PH of the limewash will promote the casein to dissolve. Make certain that all casein granules have disolved and then thoroughly mix the dissolved casein into the limewash. Admixture should be used within 24 hours after mixing.

16 oz of Old Fashioned Casein per five gallon bucket of Lime Wash is close to the old fashioned ratios we have found, however, the end user is responsible for exact ratios for the application desired and a mock-up is required. The ratios above can be reduced and altered as needed and other additives such as chalk and our Pozzolan can be added.



This is a versatile casein, and installers should be thoroughly familiarized with how casein works in lime washes/milk paints.

Old Fashioned Casein is packaged in container sizes of 16 oz 1 gallon plastic pails with lids.

The 16 oz container size contains 1 1/4 cups (approx 200 grams) of Old Fashioned Casein which is one of the historic recipe amounts of casein per five gallons of lime wash.

The one gallon container size contains 5 lbs of Old Fashioned Casein

Installation/Limitations:

Application should be done using brushes or a sprayer to a pre-wetted surface. If a sprayer is used, a thorough back-brushing must be done immediately after application.

Alkali-stable pigments can be used up to 20% of the dry binder weight of the lime wash. The addition of Old Fashioned Casein may lower "breathability" and "permability" of the substrate that it is applied too and should not be added to the Lime Wash if maximum "breathability" is desired.

Installations should not be waterproofed or sealed in any way. Not recommended for below-grade exterior applications, or for locations that are constantly and directly wet. Cleaning should be done with very weak acids (such as white vinegar), being careful not to allow cleaners to come into contact with the lime wash. Cleaning with acid degrades surface lime and leaves behind salts which can later cause efflorescence.

Lancaster Lime Works Lime Wash must not be installed over any substrate that contains salt or other compounds that may cause product failure.

Contractors are responsible for ensuring that installers are properly trained in the correct application of the product.

Training is offered by LLW

Shelf life of unopened container is approximately two years.

Technical Data and Services:

Available upon request. Call our offices at 717.207.7014.

Safety/Health:

Refer to our Old Fashioned Casein SDS for safety information. Wear eye, respiratory and skin protection at all times when handling.



Lime Wash

Product Name: Lime Wash

Manufacturer:

Lancaster Lime Works 1251 Beaver Valley Pike Willow Street, PA 17584 717.207.7014 http://lancasterlimeworks.com

Product Description:

Lancaster Lime Works Lime Wash is a non-hydraulic, pre-mixed Lime Wash with the ideal mixture of our lime putty and water. It is made by mixing high-calcium (98%), High PH (12+), carbonating, high surface area, low-magnesium, (slaked) lime putty (calcium hydroxide) with clean non-clorinated water. The lime is aged for at least one month in the bucket with the surface covered with water to prevent carbonation before being made into lime wash. It will keep like this indefinitely as long as carbon dioxide is excluded.

Designed to replace historic lime washes, it reduces the absorption of water, and allows rapid escape of moisture. With high plasticity and superior workability, it forms a strong bond with masonry units.

Basic Use:

Lancaster Lime Works Lime Wash is excellent for application over a wide variety of stucco, brick and stone, providing excellent strength, durability, breathability, and flexibility. It is especially suitable for very porous and soft masonry units.

A thin coat of Lime Wash must be applied to thoroughly dampened masonry for successful curing. Curing occurs when the Lime Wash slowly dries out over 24+ hours (this is called the carbonation process), and applying to dry masonry or any porous substrate without dampening could lead to flash drying and lime wash failure. Protect installed lime wash from drying heat and winds and frost. Additional coats may be applied after previous coats have carbonated. Carbonation usually takes 24 hours.

Allow 2 weeks of warm weather conditions (above 40 deg F.) for proper curing.

Lime Wash should be re-mixed in the bucket for 5-10 minutes just prior and during application to provide correct workability and consistent consistency and color. Water should not be added unless a thinner coat is desired.

Application should be done using brushes or a sprayer. If a sprayer is used, a thorough back-brushing must be done immediately after application.



This is a non-hydraulic lime wash, and installers should thoroughly familiarize themselves with the LLW Lime Wash Installation Guide, which can be found on the website.

Lancaster Lime Works Lime Wash is packaged in 5 gallon plastic pails with lids. It requires thorough mixing before application.

Compatible with Lancaster Lime Works mortars and Stucco.

Limitations:

Alkali-stable pigments can be used up to 20% of the dry binder weight of the lime wash. Other additives should not be added to the Lime Wash if maximum "breathability is desired. Lancaster Lime Works Old Fashioned Casein can be added as per technical instructions.

Installations should not be waterproofed or sealed in any way. Not recommended for below-grade exterior applications, or for locations that are constantly wet. Cleaning should be done with very weak acids (such as white vinegar), being careful not to allow cleaners to come into contact with the lime wash. Cleaning with acid degrades surface lime and leaves behind salts which can later cause efflorescence.

Application with a roller is not recommended.

Lancaster Lime Works Lime Wash must not be installed over any substrate that contains salt or other compounds that may cause product failure.

Contractors are responsible for ensuring that installers are properly trained in the correct application of the product. Training is offered by LLW

Technical Data and Services:

Available upon request. Call our offices at 717.207.7014.

Safety/Health:

Refer to our lime SDS for safety information. Caustic. Wear eye and skin protection at all times when handling.

LULA ELEVATOR Part 1: General

1.1 Description of Work

To furnish all labor and materials required to cover a complete installation of (one) roped hydraulic limited use/limited application (LU/LA) elevator. The elevator is to be installed in a first class workmanlike manner in accordance with the specifications and drawings provided.

1.2 Work By Others

The following preparatory work to accommodate the elevator installation is to be completed by the GC to prepare for LULA elevator.

A. Hoistway

- 1. A finished, plumb hoistway of proper size and construction conforming to ASME A17.1/CSA B44-00, all applicable building codes, and the elevator layout drawings.
- 2. Adequate supports shall be provided for fastening rail brackets as indicated on the layout drawings. Supports must withstand rail forces indicated.
- 3. A poured pit conforming to all applicable codes and to the dimensions indicated on the layout drawings must be provided. The pit must be designed for the impact load indicated and must be guaranteed dry and level from wall to wall. A fixed pit ladder shall be provided.
- 4. Knock-out in walls between the machine room and elevator hoistway for routing hydraulic and electrical lines and for hall.
- 5. Adequate sill supports at each landing are to be provided for hoistway entrances.
- 6. A lockable self closing 2'-0" x 2'-0" governor access door with electric contact shall be provided in accordance with layout drawing
- B. Machine Room
 - 1. An adjacent machine room built to conform to the layout drawings, NFPA 70, ASME A17.1, and all applicable building code requirements. It shall have suitable access, a lockable door, a convenience outlet, and light switch. Machine room temperature must be maintained between 60 and 100 degrees Fahrenheit. Relative humidity not to exceed 95%.
 - 2. A telephone line to the machine room and tied into the elevator controller as per ASME A17.1/CSA B44-00 safety codes.
 - 3. Machine room vents as required by local code.
- C. Electrical Requirements
 - 1. A 220VAC, single phase service, with neutral, to a lockable safety disconnect switch, fused with time delay fuses shall be furnished in the machine room in

accordance with NFPA 70. A normally open electric interlock contact is required in the switch for battery isolation.

- 2. A 120VAC, single phase, 15 AMP service to a lockable fused disconnect switch, or circuit breaker, located in the machine room shall be provided for the cab lighting in accordance with NFPA 70.
- 3. A pit light with switch and a GFI duplex receptacle shall be furnished in accordance with NFPA 70.
- 1.3 Quality Assurance

The elevator shall be designed, manufactured, installed, and inspected in accordance with ASME A17.1/CSA B44-00 standards and all applicable regulations of federal, state, and local codes and ordinances as adopted by local agencies having jurisdiction.

- A. References
 - 1. American National Standards Institute (ANSI)

2. American Society of Mechanical Engineers (ASME)

3. National Electric Code (NFPA 70)

4. CSA B44.1/ASME A17.5, elevator and escalator electrical equipment requirements.

5. CSA B44-00 safety code for elevators

- B. Qualifications The installation shall be performed by a company with no less than (5) years of successful experience in the assembly and erection of similar type elevators and who has adequate product liability insurance.
- C. Regulatory Requirements The elevator installer shall verify requirements of the local authority having jurisdiction and shall obtain and pay for necessary municipal and state permits and inspections as required, and make tests as called for by the regulations of such authorities.

Part 2: Submittals

2.1 Product Data Submit manufacturers literature including product data, cab designs, color charts, signal fixtures, and specifications.

2.2 Layout Drawings Layout drawings shall be submitted showing the general arrangement of the elevator equipment including dimensions, clearances, location of machine equipment, and all loads and reactions imposed on pit and building structure.

Part 3: Product

3.1 Manufacturer

The roped hydraulic LU/LA elevator shall be manufactured by Custom Elevator Manufacturing Co. Inc. Plumsteadville, PA. US. Toll Free 1-888-443-2800 or 215-766-3380 Fax 215-766-3385 or approved equal.

3.2 Characteristics

Type: Roped 1:2 Hydraulic Capacity: 1400 lbs. Car Speed: 30 FPM Operation: SAPB/single button collective Travel: (25'-0" max. per ASME A17.1) Number of Stops: Two Number of Openings: One Inside Car Dimensions: 42" X 60" X 81" high Doors: 36" x 80" two speed, horizontal sliding Power Supply: 220 Volt, single phase, 60 Hz. Cab Finish: Stainless Steel Push Button Faceplates and Handrail Finish: Stainless Steel

3.3 Equipment

A. Operation

Operation of the elevator shall be fully automatic. Control shall be single automatic push button or single button collective (field programmable); momentary pressure on any button will call or send the elevator to the corresponding landing and the car and hoistway doors shall open and close automatically.

- 1. Battery lowering: In the event of a power failure, the elevator shall automatically descend to the homepark landing, wait 30 seconds, then proceed to the bottom landing while monitoring all safety circuits. Elevator door(s) shall open and close automatically. Batteries are to have an automatic charging system.
- 2. Emergency car lighting: An emergency car light shall be furnished in the car operating panel that provides an illumination of not less than (.2) foot candles at a point (48) inches above the car floor and (11) inches in front of the car operating panel for a minimum of (4) hours.
- 3. Homepark feature: The elevator shall automatically return to a field programmable designated landing after one minute without use.
- 4. Automatic car light timer: With the in car light key switch in the "on" position, the cab lights shall time out automatically after (3) minutes and illuminate automatically when the elevator is called to a landing.
- 5. Automatic two-way leveling: The leveling device shall automatically stop and maintain the car within ½ inch of the landing regardless of the change in load.
- 6. Low oil control: A low oil control feature shall be provided designed to automatically cause an up traveling car to descend to the lowest terminal landing if the elevator should fail to reach a landing in a predetermined time or if the system does not have a sufficient reservoir of oil.
- 7. Inspection operation: Inspection operation shall be provided on the top of the car and from the main controller located in the machine room. Controller inspection shall be rendered inoperable when on top-of-car inspection. Inspection operating stations shall

LULA ELEVATOR

consist of a transfer switch and constant pressure "up", "down", and enable buttons. Top-of-car inspection station shall include an emergency stop, GFI protected duplex outlet, and a guarded light with a light switch. Controller shall be prepared with car and hoistway door bypass switches in accordance with ASME A17.1/CSA B44-00 safety codes.

- 8. Hoistway access switch: A (3) position spring return key switch shall be furnished adjacent to the top landing door used to permit movement of the car with the top landing door and car door in the open position allowing service personnel to gain access to the car top when the distance from the top of the car to the landing sill exceeds (35) inches when the car is level with the landing below.
- B. Control System

A microprocessor based control system certified and labeled to the requirements of CAN/CSAB44.1/ASME A17.5 shall be provided. It shall include a motor starter with a potential relay, motor overload device, an uninterrupted power supply with battery charging circuit, and redundant device circuits that prevent the car from moving in the occurrence of a single ground or failure of any critical circuit contactors or relays and such devices shall be monitored prior to each start to assure that these devices are functioning in there intended manner. All circuits shall be fuse protected. All to be enclosed in a single key lockable cabinet.

C. Hydraulic Power Unit

The hydraulic power unit shall include a submersible motor, rotary screw type pump, two- speed control valve, and oil reservoir with an oil level gauge. The control valve shall include a safety check valve, up and down acceleration, deceleration, leveling, and soft stop adjustments, pressure relief valve, manual lowering valve, constant down speed regulation, pressure gauge with shutoff, negative pressure switch, and manual shutoff valve all mounted and enclosed in a compact unit assembly with a key lockable cover.

D. Plunger and Cylinder The cylinder shall be constructed of steel pipe with a steel bulkplate welded to the lower end and a cylinder head welded on the upper end which houses the self-adjusting packing, bearings, wiper, air bleeder, and leach line hose. The plunger shall be manufactured from accurately ground and polished tubing fitted with a steel stop ring welded to the bottom to prevent the plunger from leaving the cylinder in the up direction.

E. Pipe Rupture Valve

An automatic shut off valve at the cylinder inlet shall be provided to stop and hold the elevator in the event of a main oil line failure or if the elevator should overspeed in the down direction. F. Car Frame and Platform The car frame shall be fabricated from structural and formed steel members, welded and bolted construction, of the cantilevered design. It shall be fitted with roller guide shoes, car safeties, and a slack cable switch that will disconnect power to the control valve if a rope should be become slack or broken. The car platform shall be fabricated from steel framing covered with plywood protected with a fire retardant material. A toe guard shall be provided at each car entrance extending below the platform.

G. Car Suspension

The elevator car frame shall be suspended by (3) 3/8" diameter, 6 X 19, traction steel cables. The cables shall dead end to the pit steel on one end, pass over a "U" groove sheave, and attach to the car safety device with approved type wedge sockets.

H. Overspeed Governor

An overspeed governor shall be provided in the overhead and a tension weight with Idler sheave shall be located in the pit. The governor cable shall be $\frac{1}{4}$ 8 x 19 traction steel and attach to the car safety device. The governor shall be designed to activate the car safeties in the event of an overspeed in the down direction. Governor shall be self resetting and be provided with means to seal the tripping speed adjustment.

I. Guide Rails

The car guide rails shall consist of (2) machined steel "tee" sections, no less than 8 lb. per foot, securely fastened to the hoistway structure with steel brackets. All rail end sections shall be tongue & groove type joined with steel splice plates.

J. Spring Buffers

Spring buffers shall be furnished in the pit when pit depth exceeds (21) inches. Buffers shall have sufficient load and stroke ratings in accordance with applicable codes.

K. Car Operating Panel

Car operating panel shall consist of metal lens call pushbuttons with red LED halo lighting and Braille tags for each landing, door open buttons, an alarm button, emergency stop key switch. Light key switch, emergency light, integral phone box with telephone, and a digital car position indicator with direction arrows and audible signal all mounted onto a brushed stainless steel faceplate.

L. Landing Controls

Landing control stations shall consist of a metal lens call button with red LED halo lighting mounted onto a brushed stainless steel faceplate.

M. Hoistway Doors

Each hoistway entrance shall consist of a two speed horizontal sliding reinforced hollow metal UL-B 1-1/2 hour fire rated door and frame assembly with prime (paintable) finish and extruded aluminum sill. Each opening shall be protected with an electro-mechanical interlock to prevent operation of the elevator unless all doors are closed and locked. 3

N. Car Doors

Each car entrance shall be provided with a two speed horizontal sliding reinforced hollow metal door panels faced with brushed stainless steel finish. An electric contact shall be provided on each car door opening to prevent operation of the elevator unless the car door(s) are in the fully closed position. Car doors shall be equipped with a zone lock used to prevent opening of the car doors unless the car is within a landing zone.

O. Door Operator

A heavy duty DC master door operator with adjustable speed and torque shall be provided for each cab opening operable even during a power failure. Door operation shall be smooth and quiet through belt transmission and door movement shall be cushioned or checked at both limits of travel. Car doors shall be equipped with a clutch used to unlock and control the individual landing doors. Doors shall open automatically at each landing upon arrival of the car then close after a predetermined time interval

P. Door Safety Edge

Each car door shall be equipped with a full height infrared light curtain that will cause the doors to stop and reverse when closing if an obstruction is detected in the door openings. The door shall return to its open position and remain open for a predetermined time then close automatically.

Q. Door Hangers and Tracks

Door hangers and tracks shall be provided for each car and hoistway entrances. Track shall be rolled steel with working surfaces contoured to match the door Hanger rollers. Hangers shall be designed for two point suspension of each door panel and shall be equipped with up thrust rollers on each hanger assembly including a secondary upthrust retainer device. A cable drive shall be used to transmit motion form one car door panel to the other and a secondary door interlock devices shall be furnished to prevent the doors from ever separating. All hanger rollers shall have polyurethane tires with pre-lubricated and sealed bearings.

R. Car Enclosure

- 1. WALLS: ³/₄" thick fire rated wood core panels with plastic laminate faced interior and blackfilled reveals to simulate applied panels.
- 2. CAR ENTRANCE: Strike column, return post, and transom shall be #4 brushed stainless steel.
- 3. CAR DOORS: Two-speed, side slide, reinforced hollow metal construction, faced on the interior with #4 brushed stainless steel finish.
- 4. CANOPY/LIGHTING: Canopy shall be steel with baked enamel white finish. Florescent lighting above a removable thermoclear panel drop ceiling supported in a aluminum "T" frame shall be furnished.
- 5. HANDRAIL: 3/8" x 2" #4 brushed stainless steel handrail shall be furnished on (1) side wall.
- 6. VENTILATION: Adequate protected vent openings shall be furnished in the car canopy and cab wall base. S. Electrical Wiring All wiring and electrical materials shall conform to NFPA 70 and with all applicable codes. Insulated wiring shall have flame-retardant and moisture proof outer covering and shall be run in conduit or electrical wireways as required. Traveling cables shall be flexible and suitably suspended to relieve strain. A pit stop switch located near and accessible from the lowest landing hoistway door shall be furnished.

T. Accessories

- 1. Cab Options
 - #4 brushed stainless steel wall panels
 - Car top emergency exit
 - Exhaust fan
 - 2. Door Options
 - #4 Brushed stainless steel entrances.
 - 3. Controls/Pushbutton Options
 - Car travel lantern with audible signal
 - ADA compliant phone
- 4. Other Options
- 208/230/480 volt, 3 phase power

Part 4: Execution

- 4.1 Examination Elevator installer shall verify dimensions of hoistway, pit, machine room, and inspect conditions of supports and structure prior to installation.
- 4.2 Installation The elevator shall be installed in accordance with the manufacturer's instructions and shall conform to ASME A17.1/CSA B44-00 and all state and local code requirements.
- 4.2 Operating Instructions Upon completion of the installation, the owner shall be instructed on the elevator's operation, safety precautions, and maintenance requirements. The owner shall be supplied with an owner's manual to retain for reference.
- 4.3 Maintenance The elevator shall be maintained in accordance with the manufacturer's recommendations and all applicable codes.
- 4.4 Warranty The elevator shall have a (2) year limited parts warranty.



Roped Hydraulic Limited Use/Limited Application (LU/LA) Elevator Planning Guide



P.O. Box 749, 5191 Stump Rd., Plumsteadville, PA 18949 **Toll Free: 888-443-2800**, Phone: 215-766-3380, Fax: 215-766-3385 www.customelevatorinc.com



This planning guide is intended to provide a general guideline for builders,

architects, and owners designing for a limited use/limited application elevator manufactured

by Custom Elevator Manufacturing Company. It is recommended that you contact your

local authorities governing the installation of public elevators in your area and follow

all guidelines for commercial building requirements and any regulations that may take

precedence over any recommendations listed or detailed in this guide.

If you should have any questions or would like to locate a dealer in your area, please call our sales department at 1-888-443-2800.

Contents

۶	Equipment Overview 1
	Work by Others
	Hoistway Size Requirements
	Recommended Hoistway Construction Plan 4
	Recommended Hoistway Construction Elevation 5
	Machine Room Plan 6
\triangleright	Specifications

Equipment Overview



> General:

- Travel up to 25'-0" (as per ASME A17.1/ CSA B44-00)
- Up to four (4) stops
- Load capacity: 1400 lbs
- Speed: 30 fpm
- Overhead: 11'-0" minimum (9'-6" minimum with alternative means for existing buildings)
- Pit depth: 3'-6" minimum (14" minimum with alternative means)
- Roped Hydraulic Drive
 - 1:2 roped hydraulic
 - o Governor actuated safety
 - Remote machine room can be located up to 40' from the hoistway.
 - 5 HP submersed motor with two-speed valve assembly
- 220 volt single phase power supply

Standard Features:

- Car size: 42" x 60" interior
- 81" interior ceiling height
- No. 4 (brushed) stainless steel hall call and car operating panel
- Brushed Stainless Steel handrail
- Fire rated wood core cab wall panels faced with plastic laminate and black filled reveals to simulate applied panels
- Car entrance including strike column, return panel, and transom are #4 brushed stainless steel finish
- Two speed reinforced hollow metal horizontal sliding car doors with #4 brushed stainless steel finish
- Infrared door edge protection with automatic door reopen system
- Steel canopy with fire rated thermoclear panel suspended ceiling and fluorescent lighting above
- Extruded aluminum car sill
- #4 brushed stainless steel certificate frame
- Two speed horizontal sliding fire rated hoistway door and frame assemblies with prime (paintable) finish and extruded aluminum sills
- Heavy duty DC master door operator
- Unfinished plywood floor
- Sill set for 1/4" finished floor
- Digital floor position indicator with car direction arrows and audible signal
- Car and hall "Acknowledge" lights
- Automatic on/off cab lighting
- Braille tags in car and hall
- Keyed emergency stop and alarm bell
- Emergency cab lighting
- Car light override key switch
- Floor selectable battery lowering
- Homepark feature
- Manual lowering device
- Top of car inspection operation
- Recessed telephone box in cab
- Microprocessor based control system
- Two year limited parts warranty

Optional Features:

- Custom car sizes, additional travel, and additional floor stops available
- Direct acting hydraulic drive in lieu of roped 1:2
- Wide variety of plastic laminate color choices
- Steel with baked enamel finish cab wall panels
- #4 brushed stainless steel cab wall panels
- #4 brushed stainless steel base (kickplates)
- Protection pads and hooks
- Car top emergency exit
- Exhaust fan
- Plastic laminate faced car door(s)
- #4 brushed bronze cab metal finishes
- Fire rated accordion car door(s) available in chalk, light oak, or aluminum finish in lieu of two speed horizontal sliding doors
- Automatic car door operator for accordion car door(s)
- 36" x 80" fire rated swing door entance(s) with prime (paintable) finish in lieu of two speed horizontal sliding doors
- Digital hall position indicators with direction arrows incorporated into the hall call station
- Car travel lantern with audible signal
- Fire service phase I and II with alternate return floor
- ADA compliant phone
- #4 brushed bronze faceplate/button finishes
- Keyed control switches in car and/or hall
- Remote-set solenoid on governor for testing from the machine room



1:2 ROPED HYDRAULIC

Work by Others



Customer, or customer's contractor, shall be responsible, at the customer's expense, for the following prior to the commencement of work by the elevator contractor.

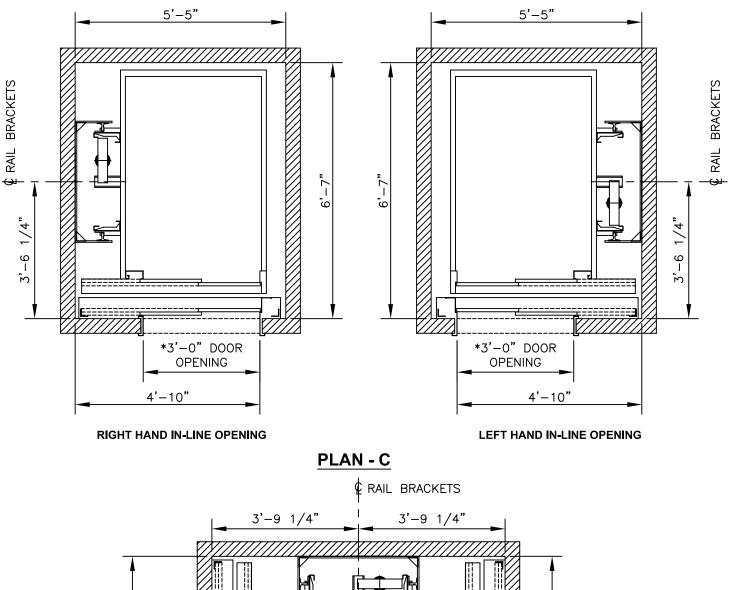
- Finished hoistway guaranteed plumb within ½ inch from top to bottom, and conforming to the dimensions indicated on layout drawings provided. All walls and side members must be square and extend from sill to beam above. Inside surface of hoistway must be flush. Interior of hoistway should be finished prior to installation. Hoistway must be constructed in accordance with ASME A17.1/CSA B44-00 and all state and local building code requirements.
- 2. Adequate supports shall be provided for fastening rail brackets as indicated on the layout drawings. Supports must withstand rail forces indicated.
- 3. Where wood frame construction is used, double 2 X 12's spaced as indicated on layout drawings, and extending the full height of the hoistway are recommended.
- 4. For masonry walls, inserts shall be provided by elevator contractor and installed by the general contractor.
- 5. Total travel distance from finished bottom floor to finished top floor must be held within 1" of that shown on layout drawings.
- 6. Overhead clearance: (top floor to underside of hoistway ceiling or obstruction) to be maintained per the layout drawings. If a minimum of 11'-0" cannot be achieved, contact factory for alternate arrangement.
- 7. A poured pit conforming to the dimensions indicated on the layout drawings must be provided. The pit must be designed for the impact load indicated and must be guaranteed dry and level from wall to wall. If a minimum of 3'-6" cannot be achieved, contact factory for alternate arrangement.
- 8. A sump pump and sump pump hole with cover is recommended in the elevator pit where water seepage is encountered. A G.F.I. receptacle is required if a sump pump is furnished. Coordinate location with elevator contractor.
- 9. A pit light with switch and a GFI duplex receptacle in accordance with National Electric Code. Coordinate location with elevator contractor.
- 10. All screens, railings, steps, and ladders as required for legal hoistway.
- 11. Barricades outside all hoistway openings for protection shall be provided and installed by general contractors.
- 12. All blockouts for hall buttons must be provided. Location to be coordinated with elevator contractor.
- 13. The entire wall of the hoistway around each opening must not be constructed until the hoistway door frames are set. Swing door entrances are to be installed by the general contractor.
- 14. Adequate supports for sill angles and sills across full width of hoistway shall be furnished at each landing. Sills are to be grouted after installation.
- 15. All wall patching, painting, and grouting by others. Finish painting of all hoistway doors and frames by others.
- 16. An adjacent machine room built to conform to the layout drawings, N.E.C., ASME A17.1/CSA B44-00, and all state and local code requirements. It shall have suitable access, a lockable door, a convenience outlet, and light switch. Machine room temperature must be maintained between 60 and 100 degrees Fahrenheit. Relative humidity not to exceed 95%.
- A 220V, single phase, 60 AMP service, with neutral, to a lockable safety disconnect switch fused with time delay fuses shall be furnished in the machine room in accordance with N.E.C. A normally open electric interlock contact is required in the switch for battery isolation.
 5 horsepower source for single phase heavy-duty switches (or equal): Square "D" Cat. #H222N, electric interlock EK-300-1; ITE Cat. #SN-322, electric interlock #SC-5. Cutler Hammer Cat. #DH222NGK, electric interlock #DS200EK1.
- 18. A 120VAC, single phase, 15 AMP service to a lockable fused disconnect switch or circuit breaker located in the machine room shall be provided for the cab lighting in accordance with N.E.C.
- 19. A telephone line to the machine room and tied into the elevator controller as per ASME A17.1/CSA B44-00 code.
- 20. Machine room vents if required by local code.
- 21. Knock-out in walls between the machine room and elevator hoistway for routing hydraulic and electrical lines shall be coordinated with elevator contractor.
- 22. A fixed vertical ladder to the pit floor extending 3'-6" above the lowest landing shall be provided when the pit depth exceeds 3'-0". Location to be coordinated with elevator contractor.
- 23. A lockable self closing 2'-0" x 2'-0" governor access door with electric contact shall be provided in accordance with layout drawing (when required).

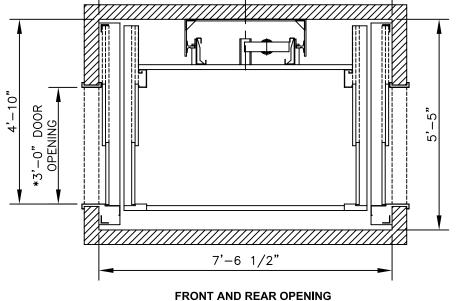
Hoistway Size Requirements



PLAN - A

PLAN - B

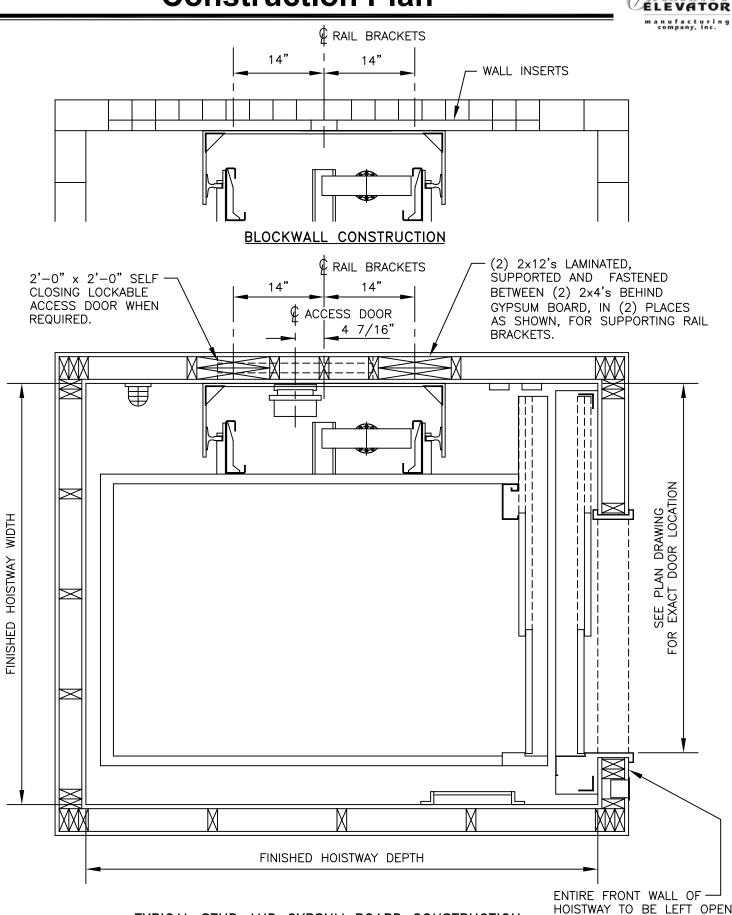




NOTE: CONTACT CUSTOM ELEVATOR MFG. CO. FOR CUSTOM CAR AND HOISTWAY DIMENSIONS.

* LEAVE ENTIRE FRONT WALL OPEN AROUND EACH HOISTWAY DOOR UNTIL DOORS AND FRAMES ARE INSTALLED.

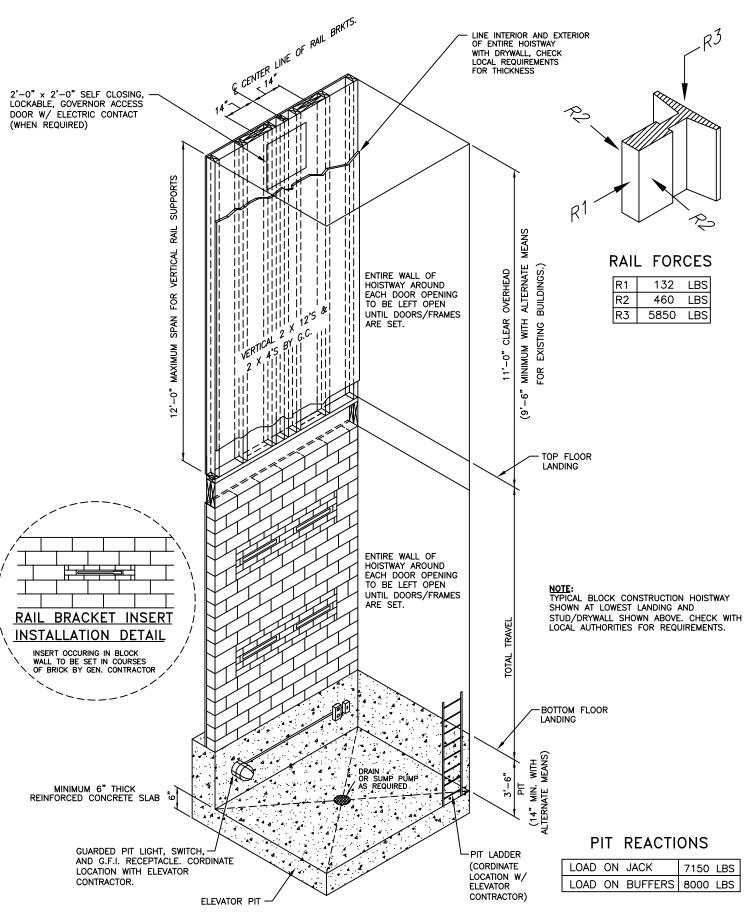
Recommended Hoistway Construction Plan



TYPICAL STUD AND GYPSUM BOARD CONSTRUCTION

Recommended Hoistway Construction Elevation

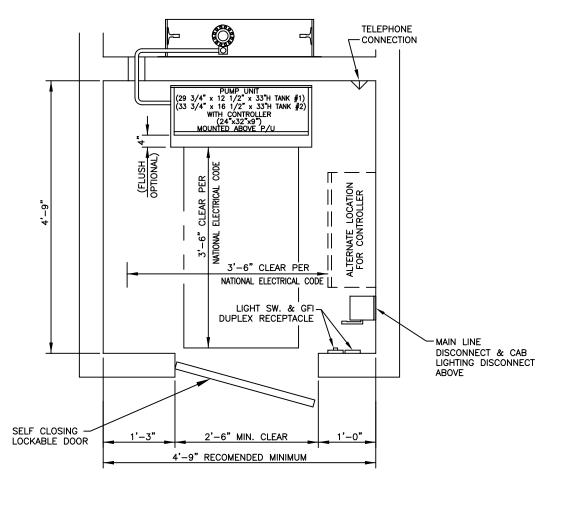
ÉLEVATOR manufacturing company, inc.







STANDARD MACHINE ROOM LAYOUT



NOTE

MACHINE ROOM MUST COMPLY WITH ALL STATE AND LOCAL CODE REQUIREMENTS.

MATERIAL REQUIRED BY OTHERS:

MAIN LINE DISCONNECT (SEE SPECIAL REQUIREMENTS)
CAR LIGHT DISCONNECT
LIGHT, LIGHT SWITCH, AND GFI DUPLEX RECEPTACLE
TELEPHONE CONNECTION
HEAT
LOCKABLE ACCESS DOOR
KNOCK-OUT BETWEEN MACHINE ROOM AND HOISTWAY
SEE "WORK BY OTHERS" FOR

MORE DETAILED REQUIREMENTS

Part 1: General

1.1 Description of Work

To furnish all labor and materials required to cover a complete installation of (one) roped hydraulic limited use/limited application (LU/LA) elevator. The elevator is to be installed in a first class workmanlike manner in accordance with the specifications and drawings provided.

1.2 Work By Others

The following preparatory work to accommodate the elevator installation is to be done by others and is part of work of other sections.

- A. Hoistway
 - A finished, plumb hoistway of proper size and construction conforming to ASME A17.1/CSA B44-00, all applicable building codes, and the elevator layout drawings.
 - 2. Adequate supports shall be provided for fastening rail brackets as indicated on the layout drawings. Supports must withstand rail forces indicated.
 - 3. A poured pit conforming to all applicable codes and to the dimensions indicated on the layout drawings must be provided. The pit must be designed for the impact load indicated and must be guaranteed dry and level from wall to wall. A fixed pit ladder shall be provided when pit depth exceeds 3'-0".
 - Knock-out in walls between the machine room and elevator hoistway for routing hydraulic and electrical lines and for hall buttons shall be coordinated with the elevator contractor.
 - All wall patching, painting, and grouting by others. Finish painting of all hoistway doors and frames by others.
 - 6. Adequate sill supports at each landing are to be provided for hoistway entrances. Swing door entrances (when provided) are to be installed by general contractor.
 - A lockable self closing 2'-0" x 2'-0" governor access door with electric contact shall be provided in accordance with layout drawing (when required).

B. Machine Room

An adjacent machine room built to conform to the layout drawings, NFPA 70, ASME A17.1, and all applicable building code requirements. It shall have suitable access, a lockable door, a convenience outlet, and light switch. Machine room temperature must be maintained between 60 and 100 degrees Fahrenheit. Relative humidity not to exceed 95%.

- 2. A telephone line to the machine room and tied into the elevator controller as per ASME A17.1/CSA B44-00 safety codes.
- 3. Machine room vents as required by local code.

C. Electrical Requirements

- A 220VAC, single phase service, with neutral, to a lockable safety disconnect switch, fused with time delay fuses shall be furnished in the machine room in accordance with NFPA 70. A normally open electric interlock contact is required in the switch for battery isolation.
- A 120VAC, single phase, 15 AMP service to a lockable fused disconnect switch, or circuit breaker, located in the machine room shall be provided for the cab lighting in accordance with NFPA 70.
- 3. A pit light with switch and a GFI duplex receptacle shall be furnished in accordance with NFPA 70.

1.3 Quality Assurance

The elevator shall be designed, manufactured, installed, and inspected in accordance with ASME A17.1/CSA B44-00 standards and all applicable regulations of federal, state, and local codes and ordinances as adopted by local agencies having jurisdiction.

A. References

- American National Standards Institute (ANSI)
 American Society of Mechanical Engineers
- (ASME) 3. National Electric Code (NFPA 70)
- National Electric Code (NFPA 70)
 CSA B44.1/ASME A17.5, elevator and
- cscalator electrical equipment requirements.
 CSA B44-00 safety code for elevators.
- B. Qualifications

The installation shall be performed by a company with no less than (5) years of successful experience in the assembly and erection of similar type elevators and who has adequate product liability insurance.

C. Regulatory Requirements

The elevator installer shall verify requirements of the local authority having jurisdiction and shall obtain and pay for necessary municipal and state permits and inspections as required, and make tests as called for by the regulations of such authorities.

Part 2: Submittals

2.1 Product Data

Submit manufacturers literature including product data, cab designs, color charts, signal fixtures, and specifications.

2.2 Layout Drawings

Layout drawings shall be submitted showing the general arrangement of the elevator equipment including dimensions, clearances, location of machine equipment, and all loads and reactions imposed on pit and building structure.

Part 3: Product

3.1 Manufacturer

The roped hydraulic LU/LA elevator shall be manufactured by Custom Elevator Manufacturing Co. Inc. Plumsteadville, PA. US. Toll Free 1-888-443-2800 or 215-766-3380 Fax 215-766-3385 and installed by______

3.2 Characteristics

Push Button Faceplates and Handrail Finish:

3.3 Equipment A. Operation

Operation of the elevator shall be fully automatic. Control shall be single automatic push button or single button collective (field programmable); momentary pressure on any button will call or send the elevator to the corresponding landing and the car and hoistway doors shall open and close automatically.

- Battery lowering: In the event of a power failure, the elevator shall automatically descend to the homepark landing, wait 30 seconds, then proceed to the bottom landing while monitoring all safety circuits. Elevator door(s) shall open and close automatically. Batteries are to have an automatic charging system.
- 2. **Emergency car lighting:** An emergency car light shall be furnished in the car operating panel that provides an illumination of not less than (.2) foot candles at a point (48) inches above the car floor



and (11) inches in front of the car operating panel for a minimum of (4) hours.

- Homepark feature: The elevator shall automatically return to a field programmable designated landing after one minute without use.
- 4. Automatic car light timer: With the in car light key switch in the "on" position, the cab lights shall time out automatically after (3) minutes and illuminate automatically when the elevator is called to a landing.
- Automatic two-way leveling: The leveling device shall automatically stop and maintain the car within ½ inch of the landing regardless of the change in load.
- 6. Low oil control: A low oil control feature shall be provided, designed to automatically cause an up traveling car to descend to the lowest terminal landing if the elevator should fail to reach a landing in a predetermined time or if the system does not have a sufficient reservoir of oil.
- 7. Inspection operation: Inspection operation shall be provided on the top of the car and from the main controller located in the machine room. Controller inspection shall be rendered inoperable when on top-of-car inspection. Inspection operating stations shall consist of a transfer switch and constant pressure "up", "down", and enable buttons. Top-of-car inspection station shall include an emergency stop, GFI protected duplex outlet, and a guarded light with a light switch. Controller shall be prepared with car and hoistway door bypass switches in accordance with ASME A17.1/CSA B44-00 safety codes.
- 8. Hoistway access switch: A (3) position spring return key switch shall be furnished adjacent to the top landing door used to permit movement of the car with the top landing door and car door in the open position allowing service personnel to gain access to the car top when the distance from the top of the car to the landing sill exceeds (35) inches when the car is level with the landing below.
- B. Control System

A microprocessor based control system certified and labeled to the requirements of CAN/CSA-B44.1/ASME A17.5 shall be provided. It shall include a motor starter with a potential relay, motor overload device, an uninterrupted power supply with battery charging circuit, and redundant device circuits that prevent the car from moving in the occurrence of a single ground or failure of any critical circuit contactors or relays and such devices shall be monitored prior to each start to assure that these devices are functioning in there intended manner. All circuits shall be fuse protected. All to be enclosed in a single key lockable cabinet.

C. Hydraulic Power Unit

The hydraulic power unit shall include a submersible motor, rotary screw type pump, two- speed control valve, and oil reservoir with an oil level gauge. The control valve shall include a safety check valve, up and down acceleration, deceleration, leveling, and soft stop adjustments, pressure relief valve, manual lowering valve, constant down speed regulation, pressure gauge with shutoff, negative pressure switch, and manual shutoff valve all mounted and enclosed in a compact unit assembly with a key lockable cover.

D. Plunger and Cylinder

The cylinder shall be constructed of steel pipe with a steel bulkplate welded to the lower end and a cylinder head welded on the upper end which houses the self-adjusting packing, bearings, wiper, air bleeder, and leach line hose.

The plunger shall be manufactured from accurately ground and polished tubing fitted with a steel stop ring welded to the bottom to prevent the plunger from leaving the cylinder in the up direction.

E. Pipe Rupture Valve

An automatic shut off valve at the cylinder inlet shall be provided to stop and hold the elevator in the event of a main oil line failure or if the elevator should overspeed in the down direction.

F. Car Frame and Platform

The car frame shall be fabricated from structural and formed steel members, welded and bolted construction, of the cantilevered design. It shall be fitted with roller guide shoes, car safeties, and a slack cable switch that will disconnect power to the control valve if a rope should be become slack or broken. The car platform shall be fabricated from steel framing covered with plywood protected with a fire retardant material. A toe guard shall be provided at each car entrance extending below the platform.

G. Car Suspension

The elevator car frame shall be suspended by (3) 3/8" diameter, 6 X 19, traction steel cables. The cables shall dead end to the pit steel on one end, pass over a "U" groove sheave, and attach to the car safety device with approved type wedge sockets.

H. Overspeed Governor

An overspeed governor shall be provided in the overhead and a tension weight with Idler sheave shall be located in the pit. The governor cable shall be $\frac{14"}{8} \times 19$ traction steel and attach to the car safety device. The governor shall be designed to activate the car safeties in the event of an overspeed in the down direction. Governor shall be self resetting and be provided with means to seal the tripping speed adjustment.

I. Guide Rails

J.

The car guide rails shall consist of (2) machined steel "tee" sections, no less than 8 lb. per foot, securely fastened to the hoistway structure with steel brackets. All rail end sections shall be tongue & groove type joined with steel splice plates.

Spring Buffers Spring buffers shall be furnished in the pit when pit depth exceeds (21) inches. Buffers shall have sufficient load and stroke ratings in accordance with applicable codes.

K. Car Operating Panel

Car operating panel shall consist of metal lens call pushbuttons with red LED halo lighting and Braille tags for each landing, door open buttons, an alarm button, emergency stop key switch. Light key switch, emergency light, integral phone box with telephone, and a digital car position indicator with direction arrows and audible signal all mounted onto a brushed stainless steel faceplate.

L. Landing Controls

Landing control stations shall consists of a metal lens call button with red LED halo lighting mounted onto a brushed stainless steel faceplate.

M. Hoistway Doors

Each hoistway entrance shall consist of a two speed horizontal sliding reinforced hollow metal UL-B 1-1/2 hour fire rated door and frame assembly with prime (paintable) finish and extruded aluminum sill. Each opening shall be protected with an electro-mechanical interlock to prevent operation of the elevator unless all doors are closed and locked.

N. Car Doors

Each car entrance shall be provided with a two speed horizontal sliding reinforced hollow metal door panels faced with brushed stainless steel finish. An electric contact shall be provided on each car door opening to prevent operation of the elevator unless the car door(s) are in the fully closed position. Car doors shall be equipped with a zone lock used to prevent opening of the car doors unless the car is within a landing zone.



O. Door Operator

A heavy duty DC master door operator with adjustable speed and torque shall be provided for each cab opening operable even during a power failure. Door operation shall be smooth and quiet through belt transmission and door movement shall be cushioned or checked at both limits of travel. Car doors shall be equipped with a clutch used to unlock and control the individual landing doors. Doors shall open automatically at each landing upon arrival of the car then close after a predetermined time interval

P. Door Safety Edge

Each car door shall be equipped with a full height infrared light curtain that will cause the doors to stop and reverse when closing if an obstruction is detected in the door openings. The door shall return to its open position and remain open for a predetermined time then close automatically.

Q. Door Hangers and Tracks

Door hangers and tracks shall be provided for each car and hoistway entrances. Track shall be rolled steel with working surfaces contoured to match the door Hanger rollers. Hangers shall be designed for two point suspension of each door panel and shall be equipped with up thrust rollers on each hanger assembly including a secondary upthrust retainer device. A cable drive shall be used to transmit motion form one car door panel to the other and a secondary door interlock devices shall be furnished to prevent the doors from ever separating. All hanger rollers shall have polyurethane tires with prelubricated and sealed bearings.

- R. Car Enclosure
 - 1. WALLS: ¾" thick fire rated wood core panels with plastic laminate faced interior and black-filled reveals to simulate applied panels.
 - 2. CAR ENTRANCE: Strike column, return post, and transom shall be #4 brushed stainless steel.
 - 3. CAR DOORS: Two-speed, side slide reinforced hollow metal construction faced on the interior with #4 brushed stainless steel finish.
 - CANOPY/LIGHTING: Canopy shall be steel with baked enamel white finish. Florescent lighting above a removable thermoclear panel drop ceiling supported in a aluminum "T" frame shall be furnished.
 - 5. HANDRAIL: 3/8" x 2" #4 brushed stainless steel handrail shall be furnished on (1) side wall.
 - VENTILATION: Adequate protected vent openings shall be furnished in the car canopy and cab wall base.
- S. Electrical Wiring

All wiring and electrical materials shall conform to NFPA 70 and with all applicable codes. Insulated wiring shall have flame-retardant and moisture proof outer covering and shall be run in conduit or electrical wireways as required. Traveling cables shall be flexible and suitably suspended to relieve strain. A pit stop switch located near and accessible from the lowest landing hoistway door shall be furnished.

- T. Accessories
 - 1. Cab Options
 - Steel baked enamel finish wall panels
 - #4 brushed stainless steel wall panels
 - #4 brushed stainless steel base (kickplates)
 - Protection pads and hooks
 - Car top emergency exit
 - Exhaust fan
 - Plastic laminate faced car door(s)
 - #4 brushed bronze metal finishes
 - Custom car sizes (consult factory)

- 2. Door Options
 - Fire rated accordion car door(s) available in chalk, light oak, or aluminum finish in lieu of two speed horizontal sliding doors
 - Automatic car door operator for accordion car door(s)
 - 36" x 80" fire rated swing door entrance(s) with prime (paintable) finish in lieu of two speed horizontal sliding doors. Swing doors include hinges, passage sets, delay action closers, and vision panel in door.
 - Low energy fully automatic power swing door operator(s)
 - #4 Brushed stainless steel entrances (two-speed only).
 - Plastic laminate doors (two-speed only).
 - · Baked enamel hoistway entrances (two-
- speed only). 3. Controls/Pushbutton Options
 - Digital hall position indicators with direction arrows incorporated into the hall call station
 - Car travel lantern with audible signal
 - Fire service phase I and II with alternate return floor
 - ADA compliant phone
 - #4 brushed bronze faceplate/button finishes
 - Keyed control switches in car and/or hall
 Other Options
 - Direct acting hydraulic in lieu of roped 1:2
 - 208/230/480 volt, 3 phase power
 - Car top/bottom stopping devices (alternate means)
 - Remote-set solenoid on governor for testing from the machine room.
 - Tank heater

Part 4: Execution

4.

4.1 Examination

Elevator installer shall verify dimensions of hoistway, pit, machine room, and inspect conditions of supports and structure prior to installation.

4.2 Installation

The elevator shall be installed in accordance with the manufacturer's instructions and shall conform to ASME A17.1/CSA B44-00 and all state and local code requirements.

4.2 Operating Instructions

Upon completion of the installation, the owner shall be instructed on the elevator's operation, safety precautions, and maintenance requirements. The owner shall be supplied with an owner's manual to retain for reference.

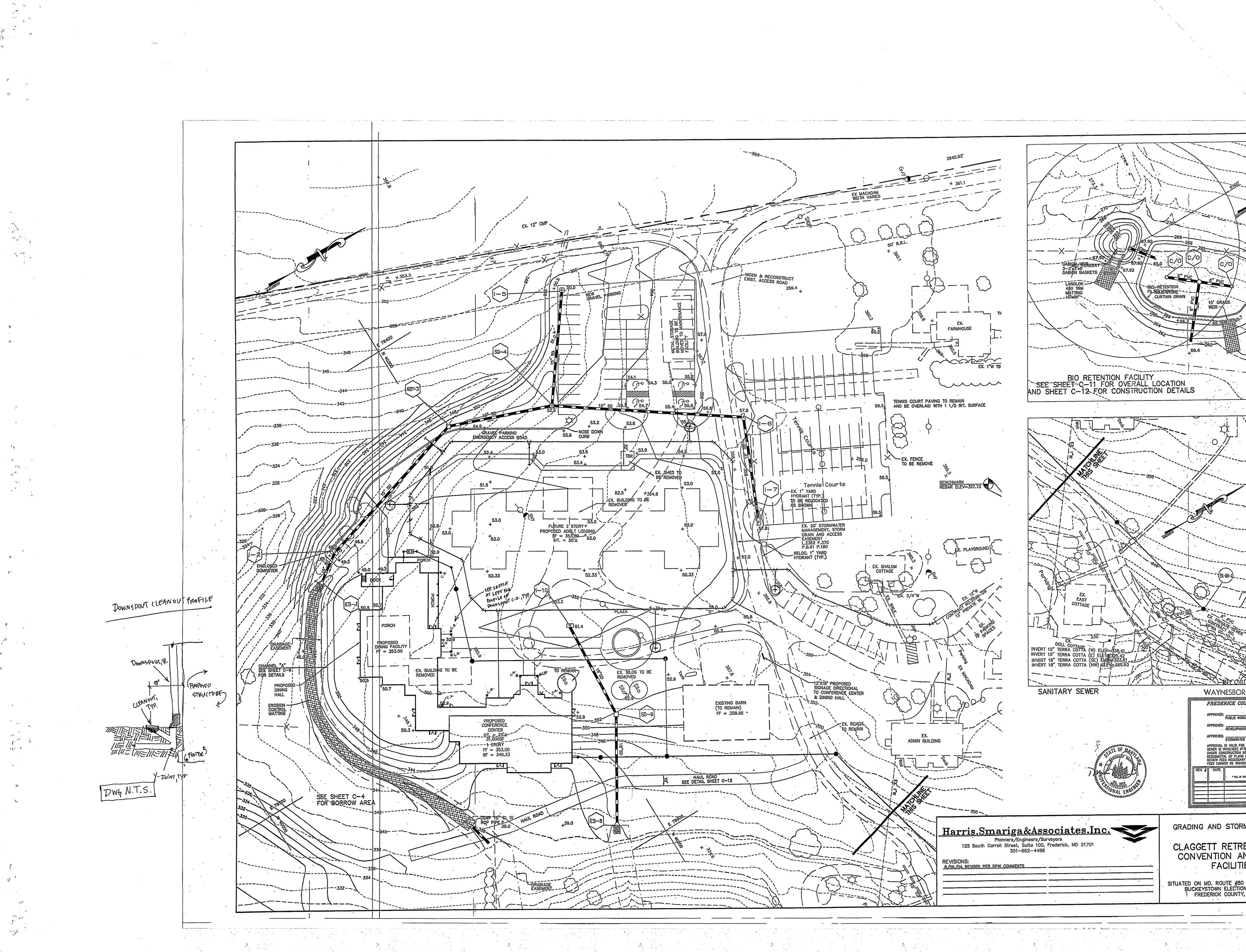
4.3 Maintenance

The elevator shall be maintained in accordance with the manufacturer's recommendations and all applicable codes.

4.4 Warranty

The elevator shall have a (2) year limited parts warranty.



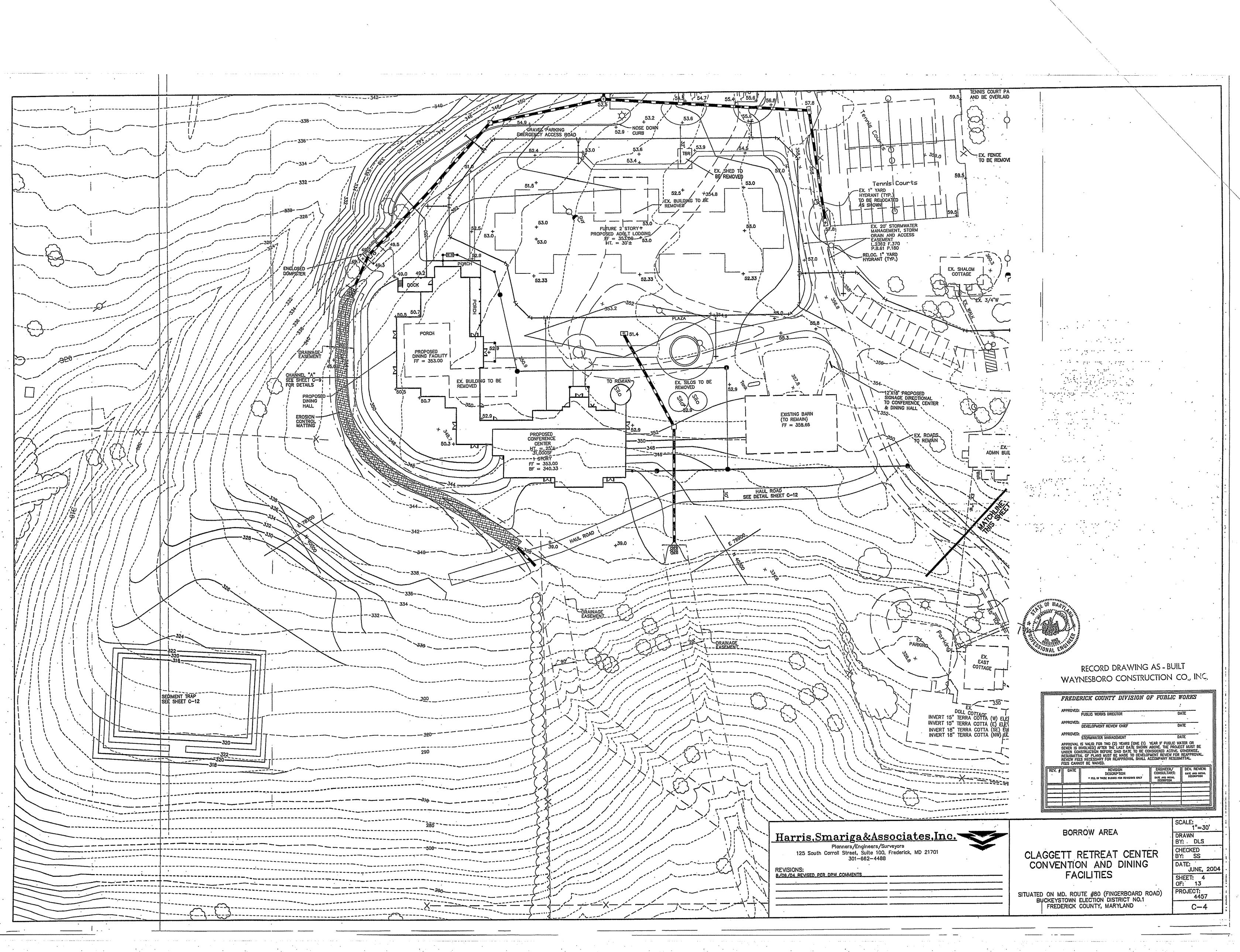


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~~~~~ \_\_\_\_ ----an and shirt way a WAYNESBORO CONSTRUCTION CO., INC FREDERICK COUNTY DIVISION OF PUBLIC WORKS APPROVAL IS VALID FOR TWO (2) YEARS [ONE (1) YEAR IF PUBLIC WATER OR SEWER IS INVOLVED] AFTER THE LAST DATE SHOWN ABOVE. THE PROJECT MUST BE UNDER CONSTRUCTION BEFORE SAID DATE TO BE CONSIDERED ACTIVE. OTHERWISE, RESUBMITTAL OF PLANS MUST BE MADE TO DEVELOPMENT REVIEW FOR REAPPROVAL. REVIEW FEES NECESSARY FOR REAPPROVAL SHALL ACCOMPANY RESUBMITTAL. FEES CANNOT BE WAIVED. ENGINEER/ CONSULTANT: DATT AND METAL OFFERENCE REVISION DESCRIPTION \* TRL IN TRIAL ELOCUS FOR REVISIONS DALY SCALE: 1"=30' GRADING AND STORM DRAIN PLAN DRAWN BY: DLS CHECKED BY: SS CLAGGETT RETREAT CENTER CONVENTION AND DINING FACILITIES DATE: JUNE, 2004 SHEET: 3 OF: 13 PROJECT: 4457 SITUATED ON MD. ROUTE #80 (FINGERBOARD ROAD) BUCKEYSTOWN ELECTION DISTRICT NO.1 FREDERICK COUNTY, MARYLAND C-3

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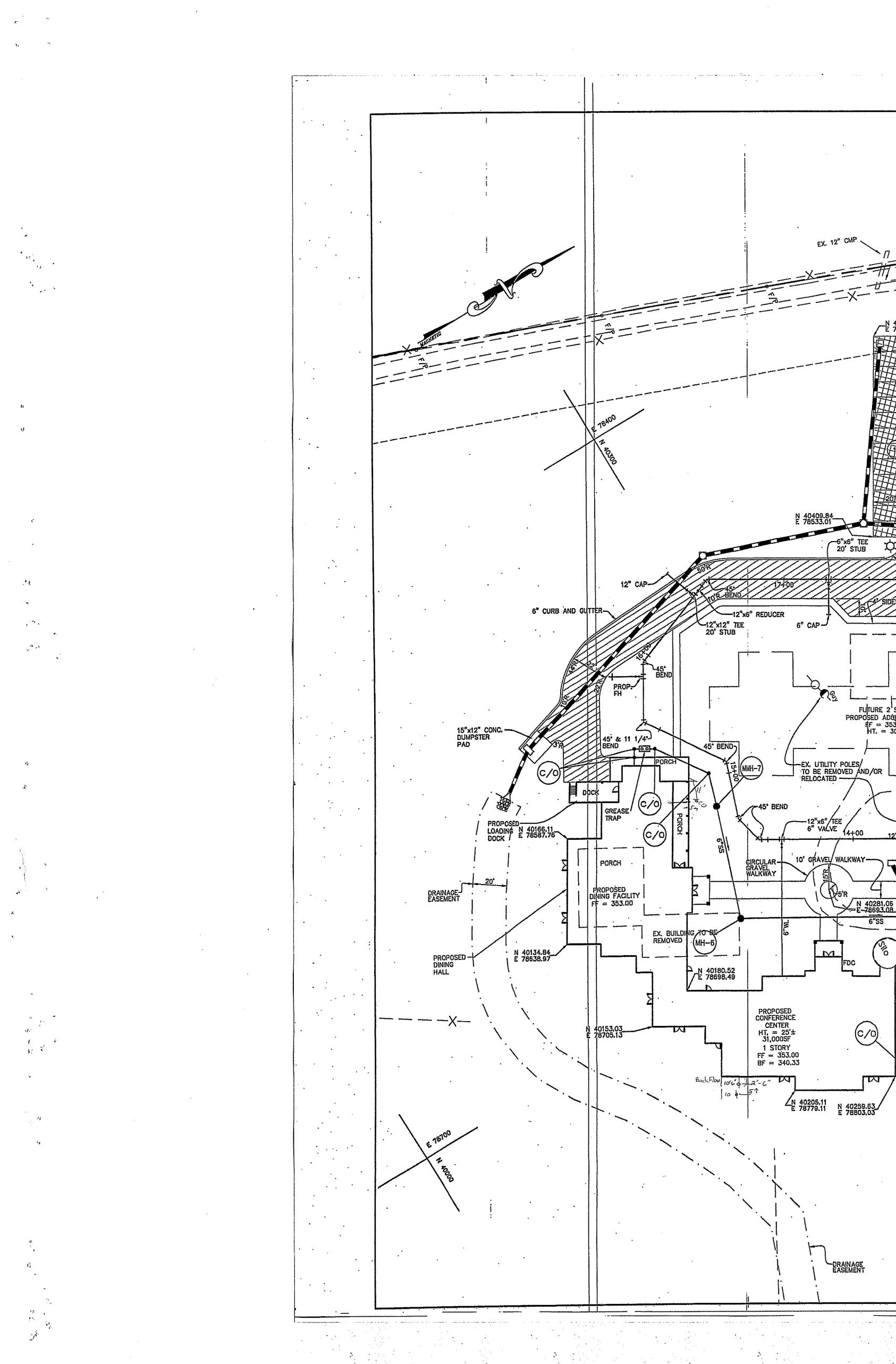
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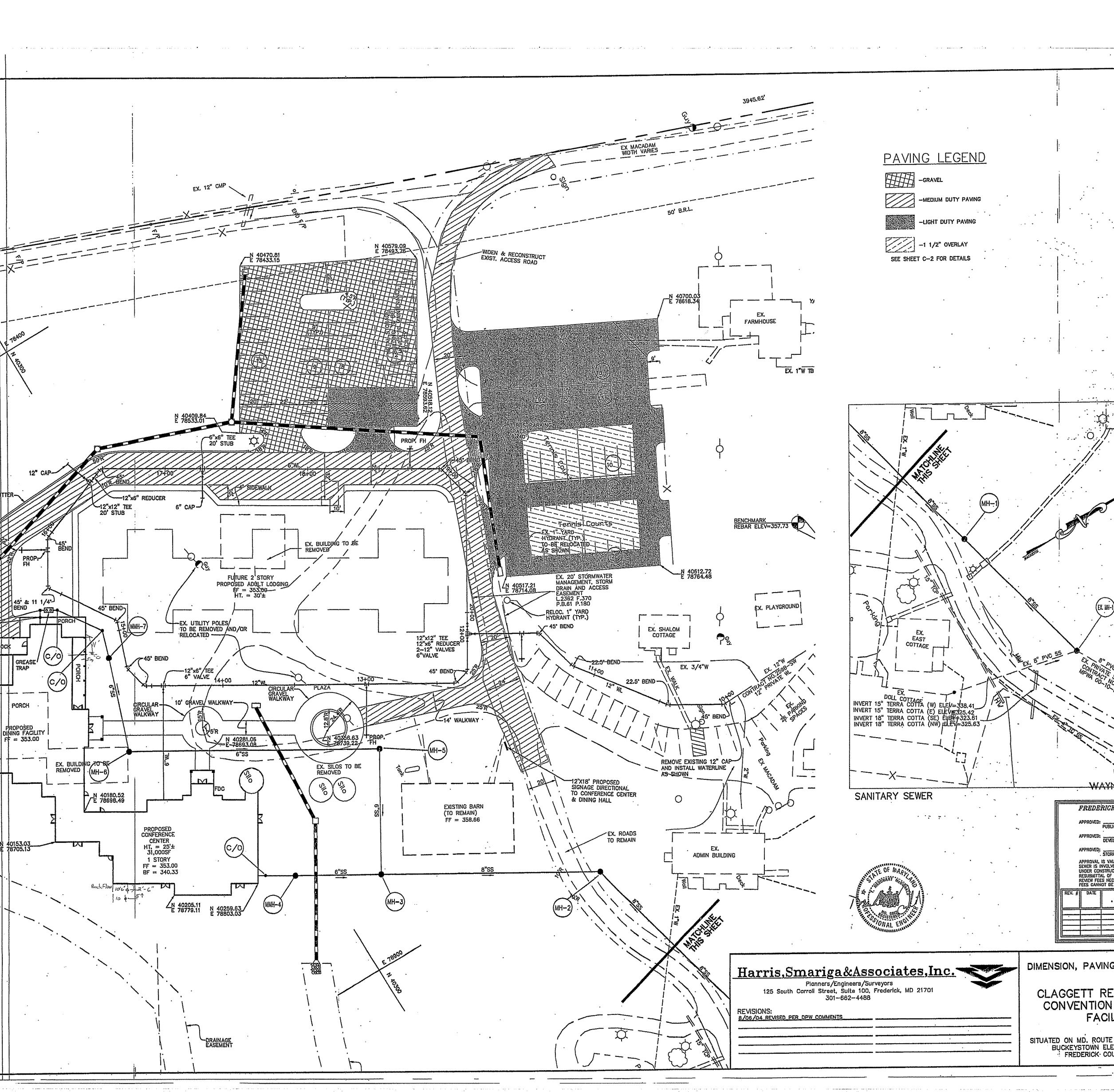


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|                                                                                                                                                                                                                                       | 329.68                                | <b> </b> .                   |
| H-1) TOP RIM SD MANHOLE ELEV<br>TOP RIM 54 CMP (N) ELEV<br>INVERT 54 CMP (SE) ELEV<br>INVERT 54                                                                                                                                       | 319.54<br>319.26                      |                              |
| HI) TOP RIM SD CMP (N) ELEV                                                                                                                                                                                                           |                                       | <b>.</b>                     |
| INVER I                                                                                                                                                                                                                               |                                       |                              |
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| CK COUNTY DIVISION OF PUBL                                                                                                                                                                                                            | LIC WORKS                             |                              |
| BLIC WORKS DIRECTOR                                                                                                                                                                                                                   | DATE                                  | Ę                            |
| VELOPMENT REVIEW CHIEF                                                                                                                                                                                                                | DATE                                  | 1 C C F                      |
| ORMWATER MANAGEMENT<br>VALID FOR TWO (2) YEARS [ONE (1) YEAR IF PUI                                                                                                                                                                   | DATE<br>BUC WATER OR                  |                              |
| VALID FOR TWO (2) YEARS [ONE (1) YEAR IF PUL<br>LVED] AFTER THE LAST DATE SHOWN ABOVE. THE<br>RUCTION BEFORE SAID DATE TO BE CONSIDERED A<br>OF PLANS MUST BE MADE TO DEVELOPMENT REVE<br>ADD PULANS MUST BE MADE TO DEVELOPMENT REVE | W FOR REAPPROVAL.                     | 6                            |
| REVISION                                                                                                                                                                                                                              | RESOUNTTAL.                           |                              |
| PESCAPTION CONSULT<br>• THL IN THESE BLOCKS FOR REMSIONS ONLY DATE AND D<br>DESCAPT                                                                                                                                                   | ANT: DATE AND HERAL                   | 10 4 4                       |
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| IG AND UTILITY PLAN                                                                                                                                                                                                                   | SCALE:<br>1"=30'                      |                              |
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| ETREAT CENTER                                                                                                                                                                                                                         | CHECKED<br>BY1 SS                     | - L                          |
| N AND DINING                                                                                                                                                                                                                          | DATE:<br>JUNE, 2004                   |                              |
| ILITIES                                                                                                                                                                                                                               | SHEET: 5<br>OF; 13                    | ][                           |
| E #80 (FINGERBOARD ROAD)                                                                                                                                                                                                              | PROJECT:<br>4457                      |                              |
| OUNTY, MARYLAND                                                                                                                                                                                                                       | C-5                                   |                              |
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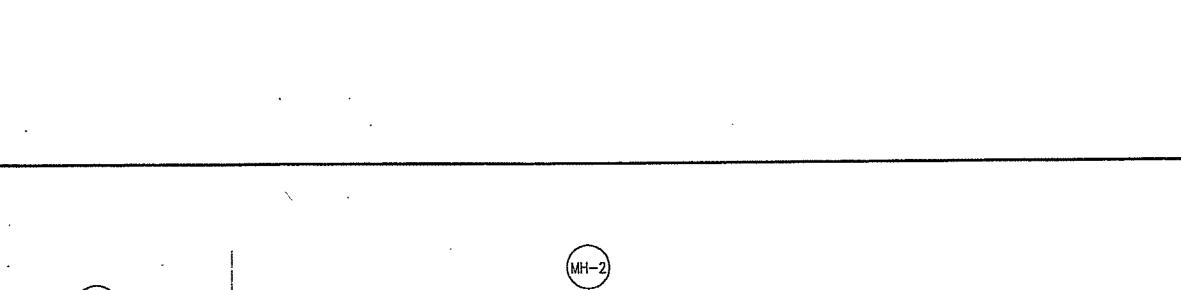
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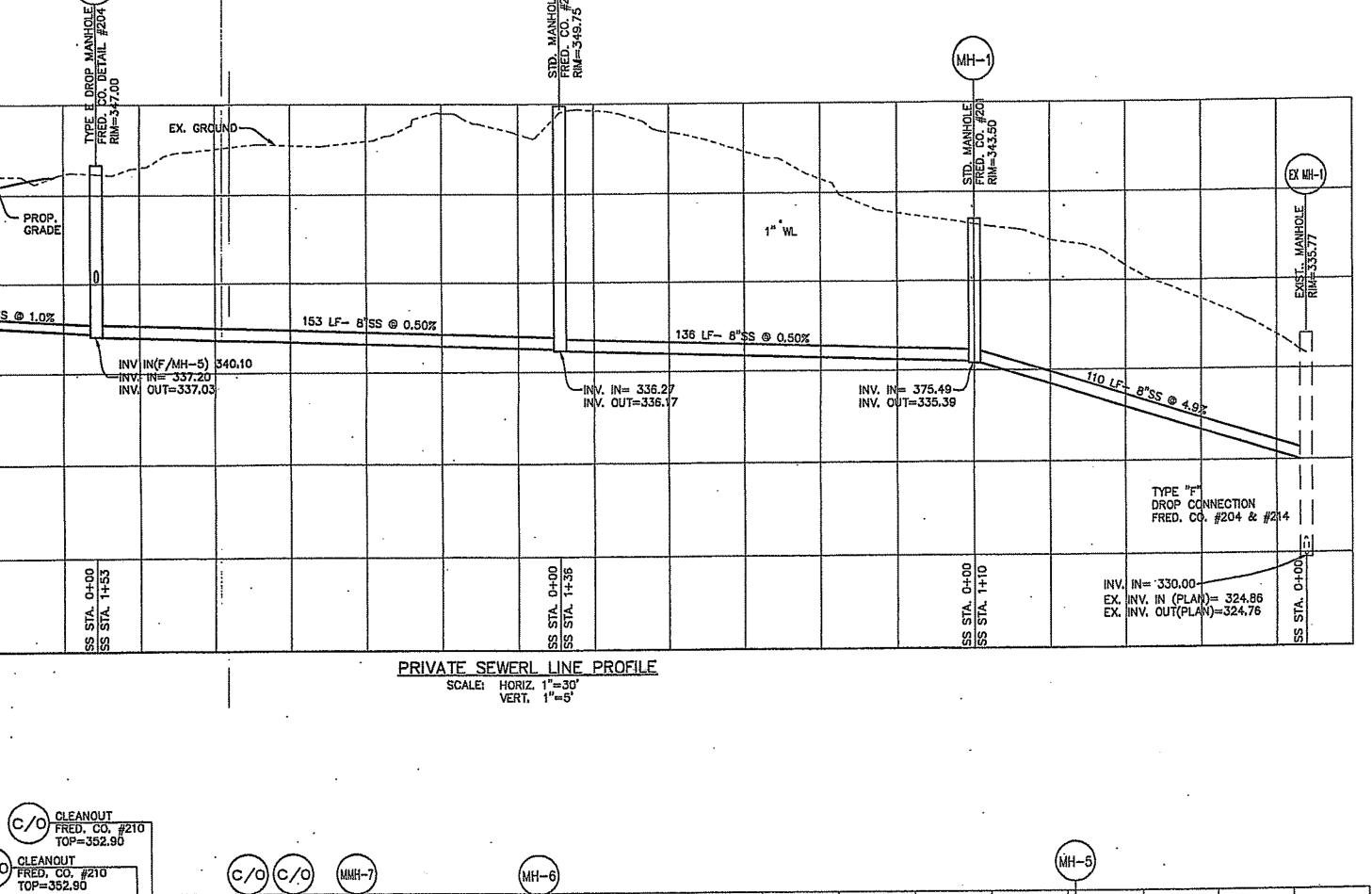
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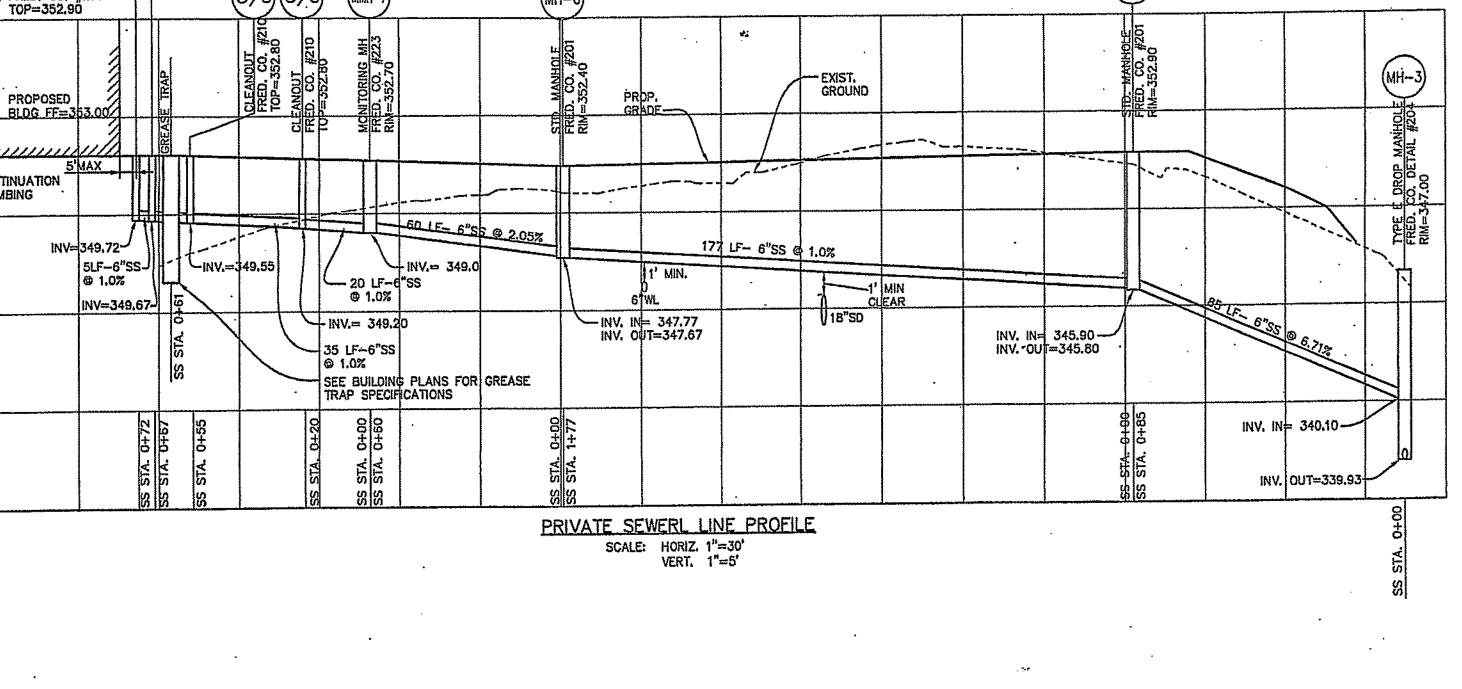
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ALL WATER AND SEWER CONSTRUC FREDERICK COUNTY GENERAL COND DETAILS FOR WATER MAINS, SANITA SPECIAL PROVISIONS AND AMENDMI THE CONTRACTOR SHALL NOT TAF SEWER MAINS WITHOUT APPROVAL THE CONTRACTOR SHALL NOT O WATER MAINS. THE CONTRACTOR IS RESPONSIBL THE CONTRACTOR SHALL FURNIS PUMPING, CONTAINMENT, ETC.) EXCAVATION WITHIN A STATE ROA ACCORDANCE WITH THE PROVISIO STATE HIGHWAY ADMINISTRATION EXCAVATION WITHIN A COUNTY R THE INSTALLATION OF UTILITIES, ACCORDANCE WITH THE PROVISIO COUNTY DIVISION OF HIGHWAY O EXISTING UTILITIES ARE SHOWN FF CONTRACTOR SHALL TEST PIT IN SIZE, ELEVATION, LOCATION AND T

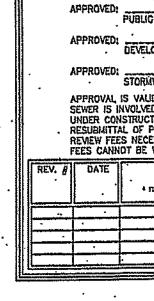
UTILITY, WHETHER SHOWN OR NO. SHALL BE REPAIRED IMMEDIATELY THE CONTRACTOR DISCOVER DISCI CONDITIONS, THE OWNER IS TO B CONTRACTOR MAKE FIELD CORREC AUTHORIZATION OF THE OWNER, RESPONSIBILITY FOR SAID CORRE ANY NECESSARY ADJUSTMENTS ARE TO BE DONE SO BY THE CO FOR REMOVING AND REPLACING

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DRAINAGE PIPES, MAILBOXES, SHI DURING CONSTRUCTION. ALL DIST ORIGINAL CONDITION OR BETTER. THE CONTRACTOR SHALL, NOTIFY PRIOR TO START OF CONSTRUCT THE CONTRACTOR SHALL BE RESP OF THE STORM DRAINAGE SYSTEM THE CONTRACTOR SHALL MAINTAI TIMES. THE CONTRACTOR, WITH O PROPERTY OWNERS IF ACCESS M PERIODS. 

ALL WATER MAINS TO BE DUCTILI MAINS TO BE PVC. TYPE PSM, SI EXCEEDS 14' USE SDR-26 PVC C MEGALUG RESTRAINTS TO BE USE DISTURBED BY OTHER CONSTRUCT ALL OUTSIDE FIRE PROTECTION I 24 REQUIREMENTS. FOR ADDITIONAL NOTES, ETC. SE CASTING FOR LIDS FOR PRIVATE A DELETE THE REFERENCE TO "FREE

WATER AND SEWER LINES SHALL FROM OUTSIDE DIAMETERS BETWE ALL COMMERCIAL BUILDINGS SHAL WITHIN THE BUILDING BY USE OF · · · · · . · · · · · · ·



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Harris, Smariga&Associates, Inc. Planners/Englneers/Surveyors 125 South Corroll Street, Suite 100, Frederick, MD 21701 301-662-4488 REVISIONS: B/06/04 REVISED PER DPW\_COMMENTS\_

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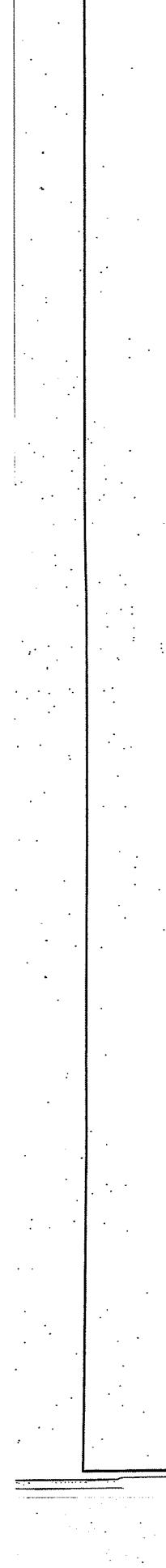
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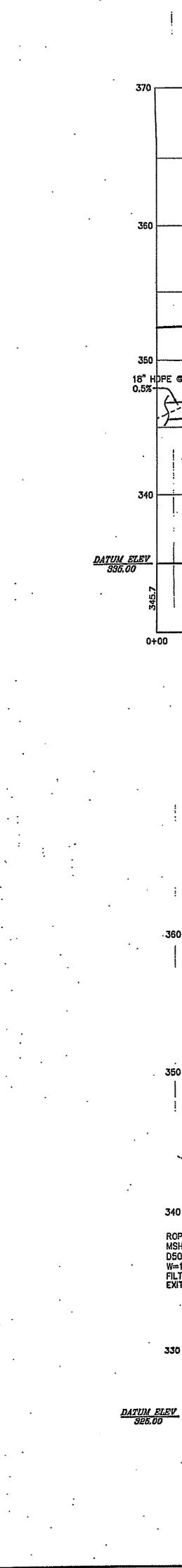
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| OUTSIDE DIAMETE<br>DIMMERCIAL BUILDING BU<br>THE BUILDING BUILD | RS BETWEEN PIPES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | D DRAWIN<br>D DRAWIN<br>D DRAWIN<br>D DRAWIN<br>D DRAWIN<br>O CONSTR<br>DIVISION OF<br>TOR<br>W CHIEF<br>SEMENT<br>2) YEARS [ONE (1) Y<br>SAID DATE TO BE COM<br>AST DATE SHOWN ONLY<br>EXAMPLE<br>SEMENT<br>2) YEARS [ONE (1) Y<br>SAID DATE TO BE COM<br>HOTO BE COM<br>HOTO BE TO BE COM<br>HOTO BE COM<br>HOTO BE TO BE COM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | G AS - 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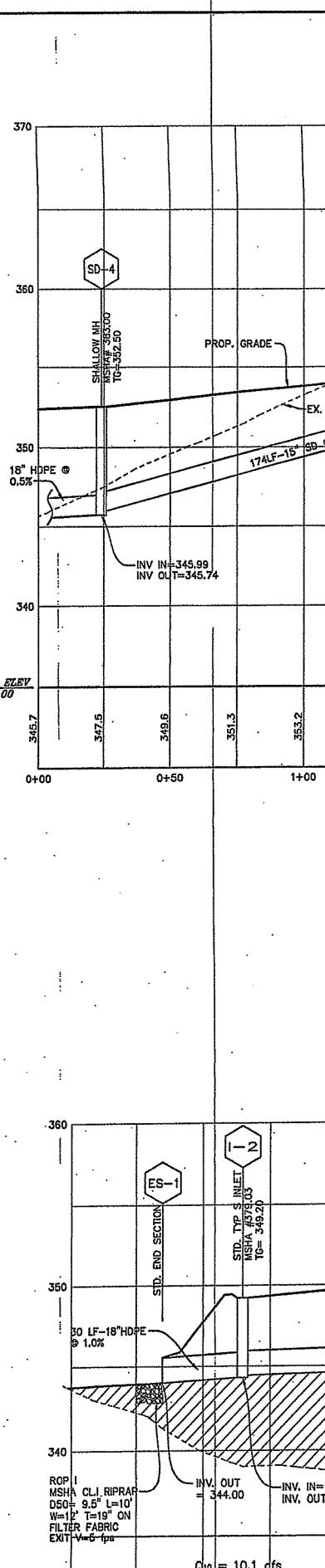
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 $Q_{10} = 10.1 \text{ cfs}$  $V_{10} = 6.8 \text{ fps}$ 330 -

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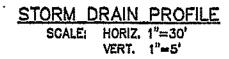
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|-----------------------|-------------------|---------------------|------------|----------------------|------------------------------------------|------|----------------------------------|------------------|------------------------------------------|-----------------------------|------------------------------------------|------------------------|--------------------|-----------------------|
| •                     |                   |                     |            |                      | SHALLOW MH<br>MSHA #383.00<br>TG= 352.00 |      |                                  |                  | SHALLOW MH<br>MSHA #383.00<br>TG= 352.50 |                             |                                          | -                      | STD. TYP S INLET ( |                       |
|                       |                   | PROF<br>GRAE        |            |                      |                                          | i    |                                  |                  |                                          |                             |                                          |                        | STD.               |                       |
| -                     | 152 1             | F-18"HDPE @         | 5 0.5%     |                      |                                          | 96   | LF-18"HDPE                       | @ 0.5%           |                                          |                             | 105 LF-15"H                              | DPE @ 1.0%             |                    | 3                     |
|                       |                   |                     |            |                      |                                          | INV. | N= 345.26<br>OUT= 345.16         | EXIST.<br>GROUND |                                          | V. IN= 345.9<br>V. OUT= 345 |                                          | 95% AS<br>D698 M       | STM<br>AIN,        | - INV. 0U7<br>= 347.0 |
| NV. IN= 3<br>NV. OUT= | 44.40<br>344.30 ( | 7 = 7.2<br>10 = 4.8 | cfs<br>fps | 95% Astm<br>698 Min, |                                          |      | $Q_{10} = 7.2$<br>$V_{10} = 4.8$ | cfs<br>fps       |                                          |                             | Q10 <sup>°</sup> =<br>V10 <sup>°</sup> = | = 3.8 cfs<br>= 5.5 fps | -                  |                       |
| ****                  |                   |                     |            |                      |                                          |      |                                  |                  |                                          |                             |                                          | *                      |                    |                       |
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|                       | <u> </u>          | 1                   | E          | · <b>I</b>           | STORM D                                  |      |                                  | L                | l                                        | <u> </u>                    | I                                        | 1                      | L                  | لمستسمع               |

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| STORM_DRAIN            | PROFILE         |      |      |  |
| SCALE: HORIZ.<br>VERT. | 1"=30'<br>1"=5' | ·    |      |  |
|                        |                 |      |      |  |

. 1-7 1-6 95LF-15" SD @ 1.0%  $Q_{10} = 2.0 \text{ cfs}$  $V_{10} = 4.9 \text{ fps}$ INV IN+353.85 INV OUT=353.75  $Q_{10} = 4.5 \text{ cfs}$  $V_{10} = 10 \text{ fps}$ 

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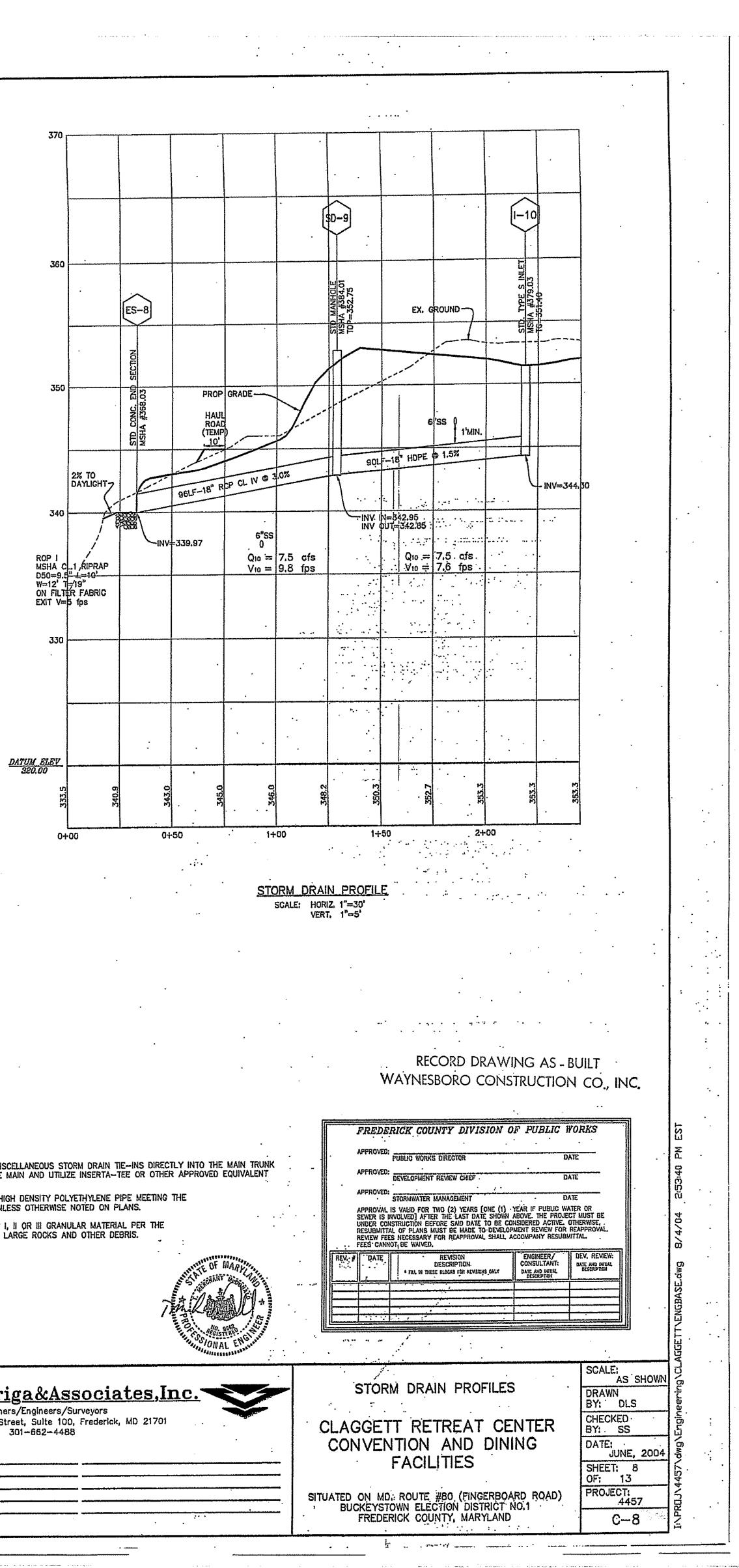
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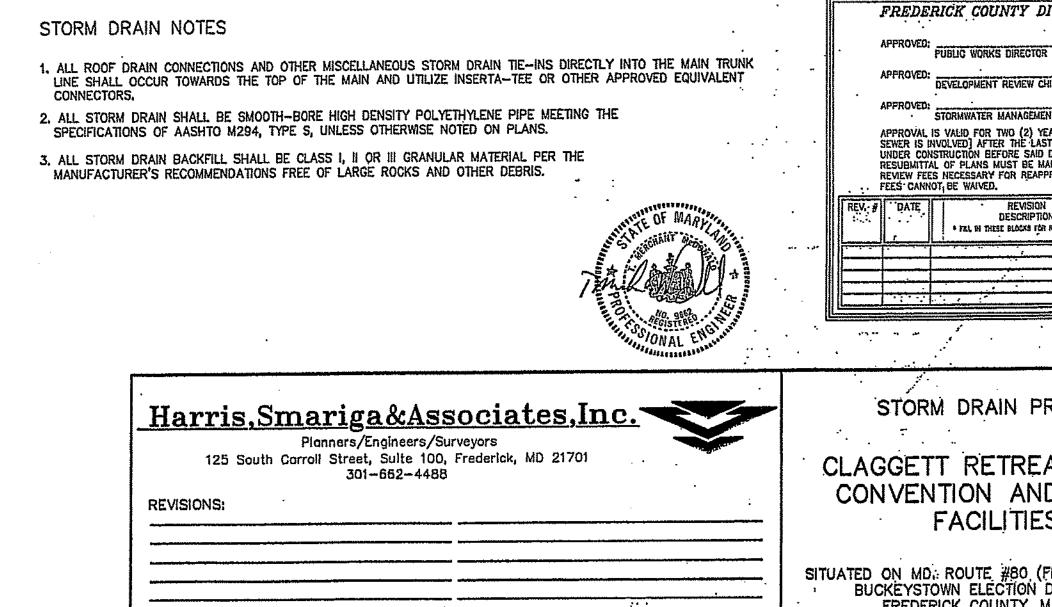
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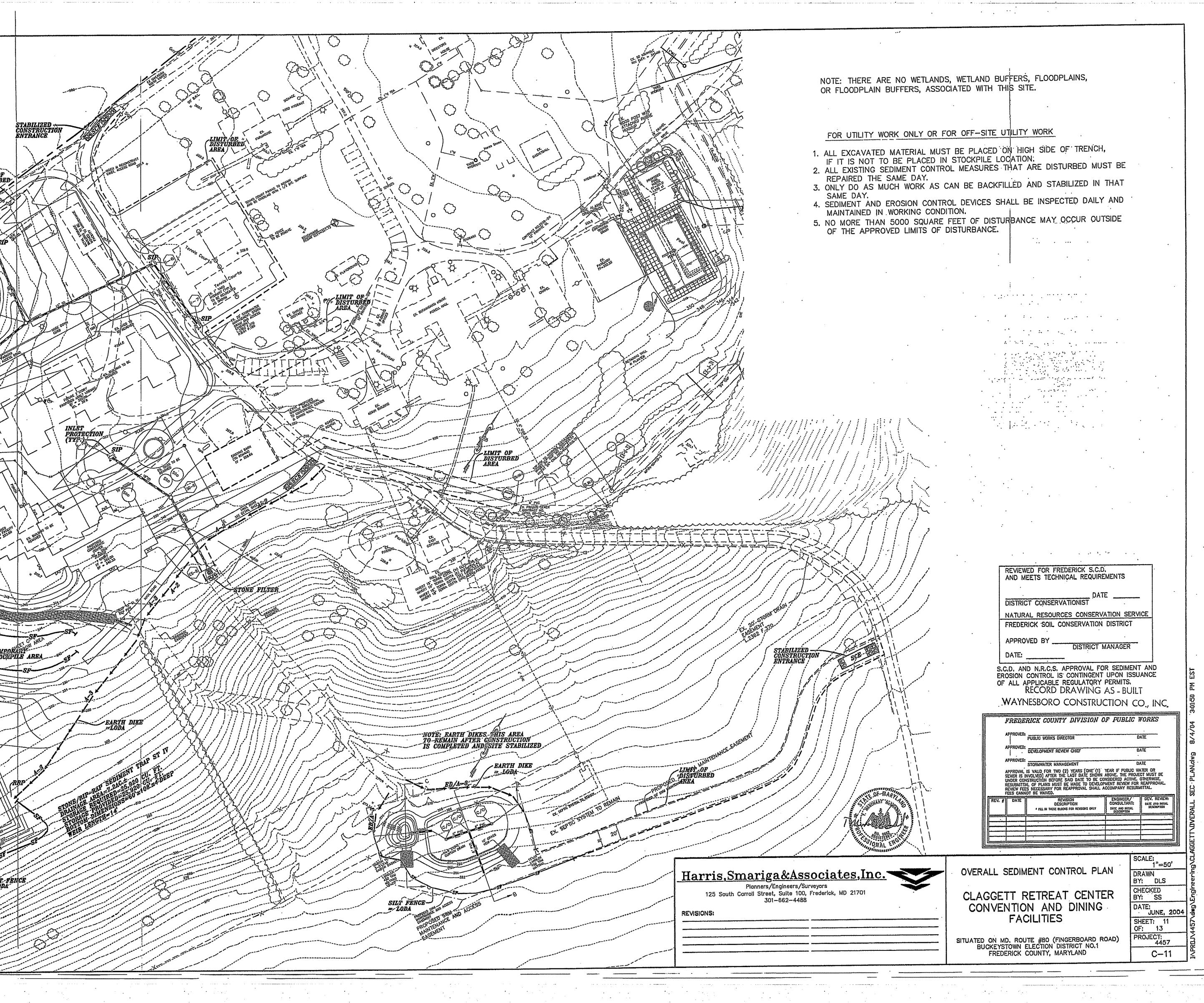
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| ISTURBED MUST BE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | •                                                      |                                              |          |  |
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| FREDERICK S.C.D.<br>CHNICAL REQUIREMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                        |                                              |          |  |
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| ERVATIONIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                        |                                              |          |  |
| CONSERVATION DISTRIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                        |                                              |          |  |
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| S. APPROVAL FOR SEDIM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                        |                                              | -        |  |
| LE REGULATORY PERMITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SSUANCE                                                | 1 EST                                        |          |  |
| D DRAWING AS - BU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | JILT                                                   | 50 PM                                        | •        |  |
| O CONSTRUCTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -                                                      | 3:01:50                                      |          |  |
| INTY DIVISION OF PUBL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                        | 8/4/04                                       |          |  |
| is director<br>T Review Chief                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | DATE                                                   |                                              |          |  |
| MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | DATE                                                   | SEC PLANdwg                                  |          |  |
| TWO (2) YEARS (ONE (1) YEAR IF FUBL<br>ER THE LAST DATE SHOWN ABOVE. THE F<br>FORE SAID DATE TO BE CONSIDERED AC<br>MUST BE MADE TO DEVELOPMENT REVIEW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | PROJECT MUST BE<br>INVE. OTHERWISE,<br>FOR REAPPROVAL. | ·PLA                                         |          |  |
| FOR REAPPROVAL SHALL ACCOMPANY R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                        | 1                                            |          |  |
| DESCRIPTION CONSULTAN<br>DATE AND INIT<br>DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 11                                                     | 'ERALI                                       |          |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SCALE:<br>1"=50'                                       | JJ/CL                                        | 1        |  |
| CONTROL PLAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DRAWN<br>BY: DLS                                       | leerir                                       | 1        |  |
| EAT CENTER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CHECKED<br>BY: SS                                      | LEngl                                        |          |  |
| ND DINING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DATE:<br>JUNE, 2004                                    | '\d∎g                                        |          |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SHEET: 11<br>OF: 13<br>PROJECT:                        | <u>\445</u>                                  |          |  |
| (FINGERBOARD ROAD)<br>I DISTRICT NO.1<br>MARYLAND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | C-11                                                   | <b>NPRDJ</b>                                 |          |  |
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