Design Feasibility Study - Final Report
New Golf Cart Building
@ Cranberry Valley Golf Club - Town of Harwich

Cranberry Valley Golf Club

183 Oak Street
Harwich, MA

Submitted: 19 May 2014

BROWN LINDQUIST FENUCCIO & RABER ARCHITECTS, INC.
203 WILLOW STREET **TEL 508-362-8382**
YARMOUTHPORT, MA 02675 **FAX 508-362-2828**

BROWN LINDQUIST FENUCCIO & RABER ARCHITECTS, INC.

19 May 2014

Robert Kingsbury, Chairman
Cranberry Valley Golf Club
Cart Barn Building Committee
183 Oak St.
Harwich, MA 02645

RE: Submittal of Final Design Study
CVGC Cart Barn Building
Town of Harwich

Dear Mr. Kingsbury:

We would like to thank you and the committee for the access, support and insight provided to us and our consultants during the preparation of this design feasibility study for the new Golf Cart Building at the Cranberry Valley Golf Club

Enclosed please find our 100% complete Final Report which includes all of the following deliverables:

- Executive Summary
- Conceptual Design Drawings
- Project Budget with detailed Construction Cost Estimate
- Project Development Schedule for Upcoming Phases
- Copies of all Meeting Memoranda
- Code Review Summary

We trust that this information will assist the Town of Harwich with making an informed decision regarding further development of this program. If you require any additional information, please do not hesitate in contacting either of us.

Sincerely yours,

Kurt Raber
Principal-in-Charge

Thomas Swensson
Project Manager

TS/ak

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Design Feasibility Study
New Golf Cart Building
@ Cranberry Valley Golf Course – Town of Harwich

Brown Lindquist Fenuccio & Raber Architects was hired by the Town of Harwich to complete a feasibility study for the Cranberry Valley Golf Club Cart Storage Barn. The study entails replacing the existing golf cart storage sheds and fence enclosure with a new Golf Cart Storage Barn. Through this study the architect was to determine size requirements for a facility to house 90 golf carts. The study also entailed investigating several siting options and complete schematic plans and elevations for the proposed design. The existing cart storage sheds are situated in the center of the east end of the existing parking lot along with an above ground fuel storage tank. The fuel storage tank is to be relocated to the new building location.

The existing cart storage is inadequate because it only provides room for storage of approximately 70 carts, some of which are not under cover in the off season. The wood shed structures are minimal and have no aesthetic qualities whatsoever. The cart wash down area is only a space in the driveway next to one of the sheds. The current location of the cart storage poses hazards for both pedestrians and vehicles due to traffic patterns created by default around the building. Currently there are no designated areas for staff to use or storage for repair and spare parts. Storage for 70 carts is inadequate for the current Golf Club needs and they would like to build a structure that can house 90 carts under cover that is a drive through design to facilitate moving carts in and out of the building. The design should include space for staff to sit between tasks along with a workbench for repairs and a room for spare parts.

A number of approaches were investigated and resulted in multiple schemes. Concerns to be addressed relative to the buildingÕs location were safety with regard to pedestrian and vehicular traffic patterns, operational issues with regard to staging and moving of carts, and cart traffic patterns created by 9 hole vs. 18 hole play and access to the driving range and chipping green. The new building should address these safety and operational issues as well as provide an aesthetically pleasing structure that satisfies the space program requirements.

The resultant schemes explored locations south of the existing entrance drive near the chipping green and near the 1st tee as well as the north side of the existing parking lot. The final selected concept is situated on the north side of the parking lot and encroaches slightly on the conservation area created by the existing kettle pond. This location proved to be the best compromise given the existing parameters. Not all issues are resolved but this location will improve traffic and safety considerably. Key to this location choice is access to an existing cart path north of the parking lot. Use of this cart path will divert cart traffic away from the clubhouse thus reducing cart/pedestrian conflicts. It also provides good orientation for the possible addition of solar panels in the future.

The proposed new building is a one story 6,200 square foot structure with overhead doors on each end to provide the most amount of flexibility with respect to moving carts in and out. Ancillary spaces included in the building are rooms for parts storage, electrical service, work bench and a small space for staff. Adjacent to the new building on the west side is the relocated fuel storage depot and cart wash bay. This allows carts to be washed and fueled after play and then placed in the barn through the doors on the west end of the building ready to exit doors on the east end; or continue through to the parking lot.

Permitting the project will require filing and approval of a Notice of Intent with the Harwich Conservation Commission. Staff has informally reviewed the proposed conceptual design and believes the plan is permittable. The unique and very large site has plenty of open space so planning issues such as zoning setbacks, lot coverage, or impervious coverage should not be concerns for this project. In fact, construction of this project will offer a net increase in parking and other environmental benefits.

Brown Lindquist Fenuccio & Raber Architects, Inc. has developed a Preliminary Project Cost Estimate with the consultation of an independent construction cost estimator. The overall price for this project is projected to be in a range of $191 to $255 per square foot. The mean cost in this range is approximately $1,415,000 (this is inclusive of a 5% project contingency and two years of possible inflation @ 4% per year. This estimate attempts to account for all reasonably anticipated expenses associated with the design and construction of the proposed project and includes hard and soft costs.

The following Deliverables were provided during the course of this study:

1. Approved Program Outline
2. Zoning, Building and Plumbing Code Review
3. Conceptual Site Plans
4. Schematic Building Plan and Elevation Design Drawings
5. Preliminary Construction Cost Estimate
6. Overall Project Budget Summary
7. Draft & Final Design Feasibility Study Reports

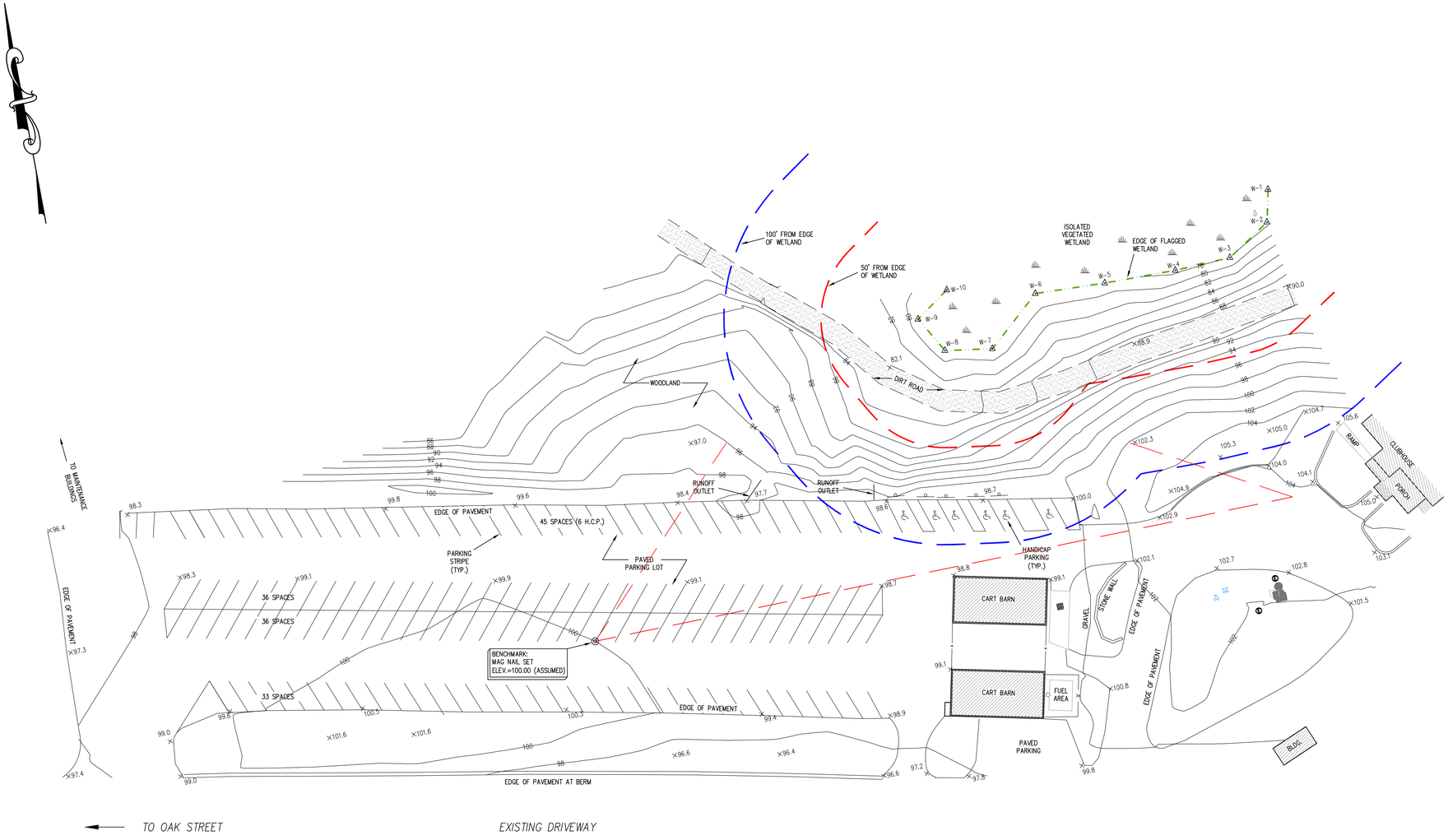
Photo Survey

Existing Cart Wash Area

Existing Golf Cart Storage Area

**Existing Cart Path
North of the Parking Lot**

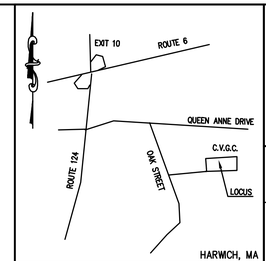
Existing Fuel Storage to be relocated



PLAN

30 15 0 30 90

1 inch = 30 ft.



KEY MAP
NO SCALE

PLAN REFERENCES:

ASSESSORS MAP 61, PARCEL H1

DATUM NOTE:

ELEVATIONS SHOWN HEREON ARE BASED ON AN ASSUMED DATUM

LEGEND

- CATCH BASIN
- WATER VALVE
- HYDRANT
- CABLE TV BOX
- TELEPHONE BOX
- ELECTRIC MANHOLE
- LIGHTPOST
- MISC. SIGN
- EDGE OF WETLAND
- FENCE
- 100 CONTOUR
- X 95.6 SPOT GRADE

ISSUED TO ARCHITECT FOR CONCEPTUAL PLANNING

COASTAL ENGINEERING COMPANY, INC.
260 Cranberry Hwy. Orleans, MA 02653
508.255.6511 Fax: 508.255.6700

NO.	DATE	REVISION	BY

SEAL

PROJECT
CRANBERRY VALLEY GOLF
183 OAK STREET HARWICH, MA

SHEET TITLE
PLAN SHOWING EXISTING CONDITIONS AT THE PARKING LOT, CART STORAGE AREA, AND CLUBHOUSE DROP OFF AREA

SCALE	AS NOTED
DRAWING FILE	C1528701-C3D.dwg
DATE	9-24-13
DRAWN BY	JLH
CHECKED BY	JDM/DJM

C1.2.1

1 OF 1 SHEETS

PROJECT NO. C15287.01

AERIAL VIEW OF EXISTING CONDITIONS

STAMP:

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GOLF CART BUILDING
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB

183 OAK STREET HARWICH, MA

TITLE:	REVISIONS:	DRAWN BY:	DRAWING NO.:
EXISTING SITE PLAN	--	RV	SP1.0
		DATE ISSUED: 12.04.2013	

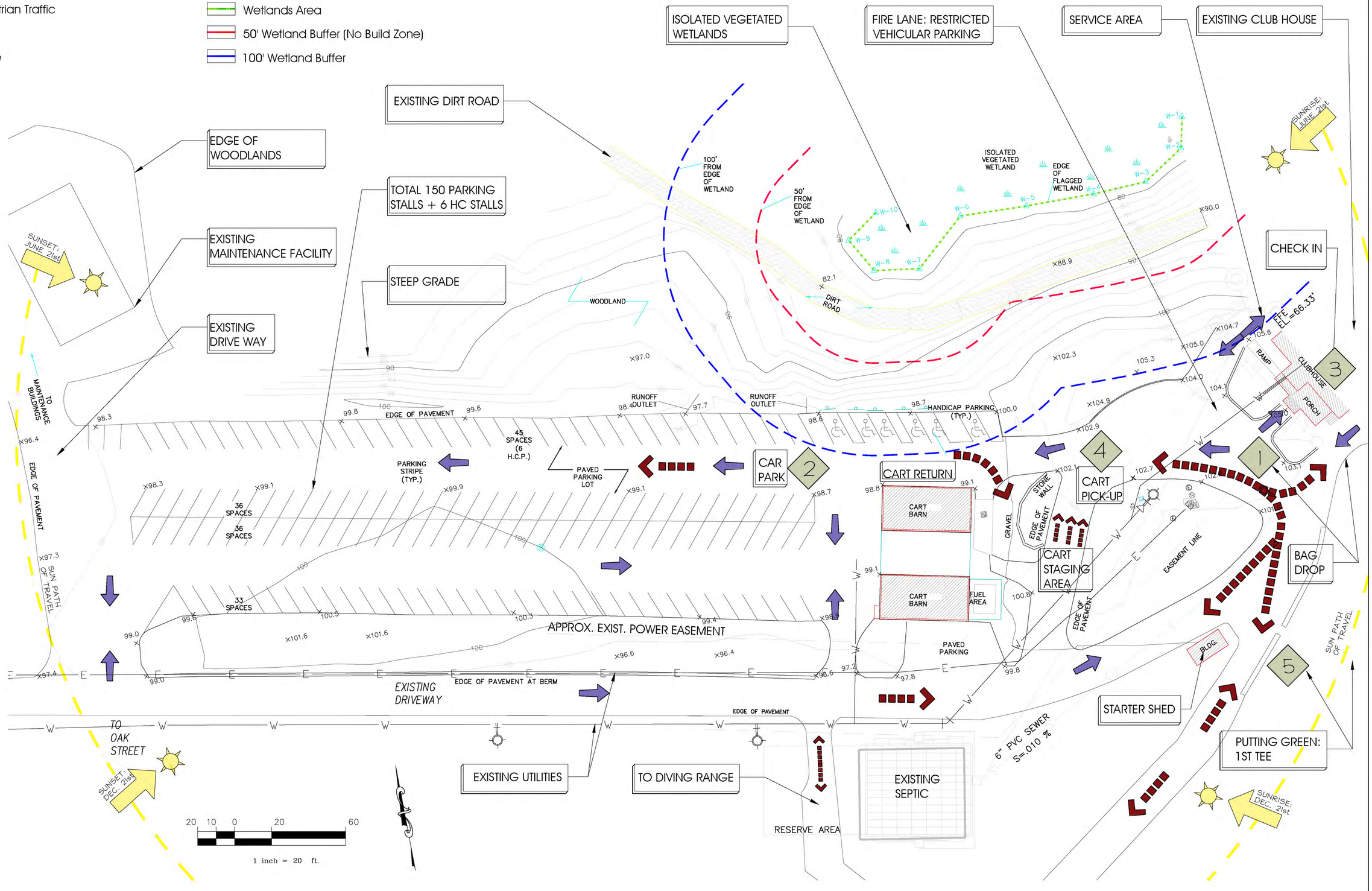
CONCEPTUAL SITE ANALYSIS

Legend

- Vehicular/ Pedestrian Traffic
- Cart Path
- Patron Sequence
- Solar Orientation
- Wetlands Area
- 50' Wetland Buffer (No Build Zone)
- 100' Wetland Buffer

PROS:

CONS:



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GOLF CART BUILDING IMPROVEMENTS FOR THE CRANBERRY VALLEY GOLF CLUB

183 OAK STREET HARWICH, MA

TITLE:	REVISIONS:	DRAWN BY:	DRAWING NO.:
EXISTING SITE PLAN	--	RV	EX1.0
		DATE ISSUED: 10.17.2013	

BROWN LINDQUIST FENUCCIO & RABER ARCHITECTS, INC.

DESIGN MEETING MEMORANDUM

MEETING DATE: 5 December 2013
PROJECT: Cranberry Valley Golf Cart Storage Building
PRESENT: Bob Kingsbury (Committee chair), Clem Smith (Golf Committee chair), Dennis Hoye (Director of Golf), Building Committee Members, Kurt Raber (BLFR), Tom Swensson (BLFR), Ruben Valenzuela (BLFR), Angelo La Mantia (guest)
Distribution: All Attendees, Dave Michniewicz (Coastal Engineering), Shawn Fernandez (Superintendent)

DISCUSSION / ACTION ITEMS

New Business:

1. BLFR presented three new schemes for alternate locations for the Cart Storage Building. The scheme shown on Sheet SP-2 situates the building between the 1st Tee and the 9th Green; Sheet SP-3 situates the building at the easterly end on the north side of the existing parking lot; and Sheet SP-4 situates the building centered on the north side of the existing parking lot.
2. Upon review of each scheme the following pros and cons were discussed:
   - SP-2, 1st Tee/9th Green
     Pros
     -Operationally works well for golf cart staging, cleaning, etc.
     -Completely separates the cart storage building from the parking area and minimizes conflicts between golf cart and automobile traffic.
     -Provides most amount of parking spaces.
     Cons
     ï Too close to Green 9 & Tee 1 and thus a distraction at both.
     -Area is subject to excessive drainage which would have to be addressed and will add to cost.
     -Too distant from Clubhouse and parking.
   - SP-3, East end of Parking Lot, north side
     Pros
     ï Location is good relative to access from course to the parking lot after 9 hole play.
     -Close to Clubhouse.
     Cons
     -Less parking due to need to keep building out of wetlands 50ôbuffer.

-Requires NOI filing with Conservation Commission.
-Staging of golf carts in the morning is circuitous.

- SP-4, Center of Parking Lot, north side

  Pros

  ï Location is good relative to access from course to the parking lot after 9 hole play.
  -Location is on the flatter portion of the area between the parking lot and kettle pond which means a little less excavation/grading and shorter foundation walls.
  -Avoids Wetland setbacks
  -Provides more parking spaces than SP-3

  Cons

  -Further from Clubhouse.
  -Staging of golf carts in the morning is circuitous.

3. Committee felt it was difficult to evaluate the difference between schemes without knowing the difference in cost of site grading between schemes; and given grading in some of the schemes is there an advantage relative to cost for a 2 level building. Briefly discussed problems of a 2 level building with regard to ramping up and/or down to each level.
4. D. Hoye reiterated that 40 carts need to be queued in the morning and the approved plan needs to accommodate that.
5. With regard to parking a compromise between SP-3 and SP-4 (151 vs. 183 spaces) would suffice keeping in mind proximity to the Clubhouse is more important than the number of spaces.
6. Parking issues discussed:
   - Parking/traffic flow in the interim re. 2 parts of construction ï parking lot expansion and Cart Building construction. Plans show new parking lot construction, an alternate plan needs to be developed for an interim scheme which doesnôt change the lot size.
   - How many handicapped spaces? Approximately 8 spaces are required for the amount of spaces proposed give or take a space.
   - Fire lane ï location and building access needs to be reviewed with the Fire Department.
   - B. Kingsbury felt SP-3 disrupts the parking too much.
   - J. Hudson felt the distance between Cluhouse and Cart building is a problem.
   - Need to keep the access at and around the rotary simplified, perhaps limiting autos to the west of it and golf carts to the west.
7. A. La Mantia suggested focus on the customer, place the Customer at higher priority than the Staff. He also suggest reviewing the proposed scheme with various boards in town (Planning, Health, Fire, Finance and Capital Outlay) and present informally to the Board of Selectmen.

8. In conclusion it was agreed to develop a final scheme showing the building in SP-4 located approximately 50ôto the east toward the Clubhouse getting as close to the wetlands as possible. With that scheme B. Kigsbury will have an informal meeting with the Conservation agent to see what obstacles may need to be addressed.

The above constitutes our understanding of the primary issues discussed at the subject meeting. If there are any errors or omissions, please contact our office as soon as possible.

Respectfully submitted,

Tom Swensson

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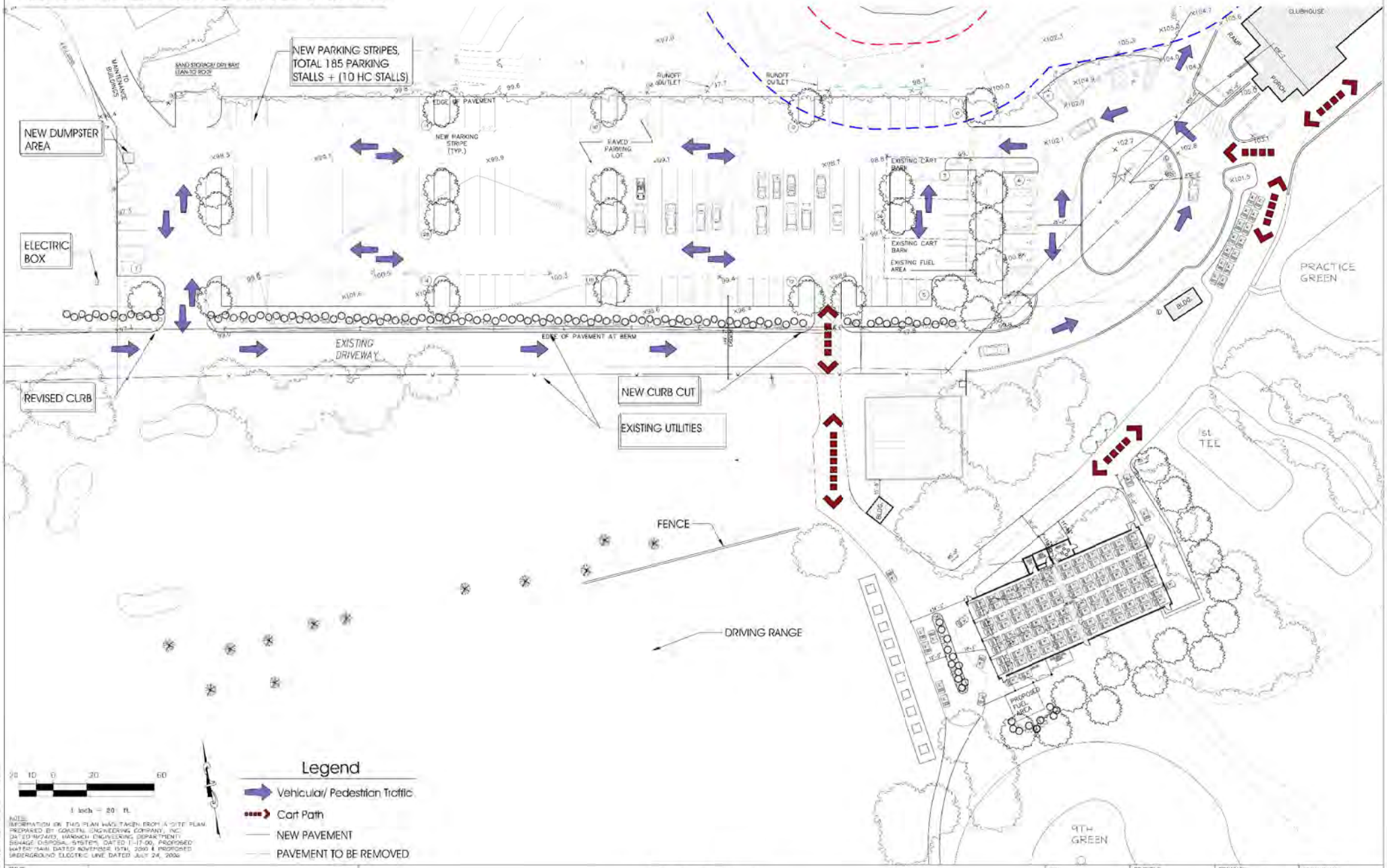
CONCEPTUAL SITE PLAN



NOTE:
INFORMATION ON THIS PLAN WAS TAKEN FROM A SITE PLAN PREPARED BY COASTAL ENGINEERING COMPANY, INC. DATED 9/24/13, HARWICH ENGINEERING DEPARTMENT DRAINAGE DISPOSAL SYSTEM, DATED 1-17-00, PROPOSED WATER MAIN, DATED NOVEMBER 15TH, 2000 & PROPOSED UNDERGROUND ELECTRIC LINE DATED JULY 24, 2006

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GOLF CART BUILDING IMPROVEMENTS FOR THE CRANBERRY VALLEY GOLF CLUB
183 OAK STREET HARWICH, MA

BILL:
EXISTING SITE PLAN

REVISIONS:

DRAWN BY: RV

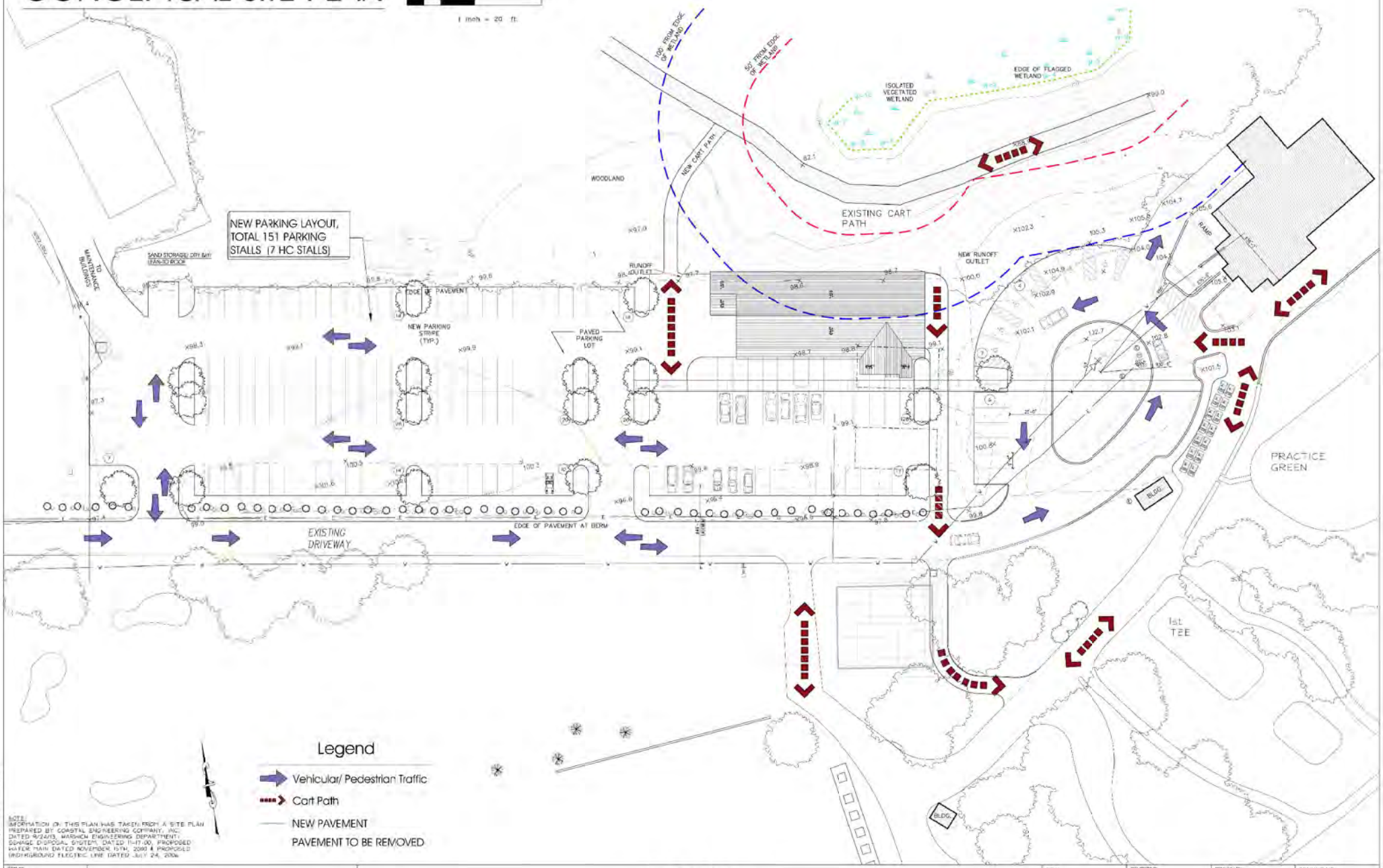
DATE ISSUED: 12.04.2013

DRAWING NO.: SP-2

CONCEPTUAL SITE PLAN

20 10 0 20 60

1 inch = 20 ft.



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PH.508-362-8382
FAX.508-362-2822

GOLF CART BUILDING IMPROVEMENTS FOR THE CRANBERRY VALLEY GOLF CLUB
183 OAK STREET HARWICH, MA

TITLE: PROPOSED SITE PLAN

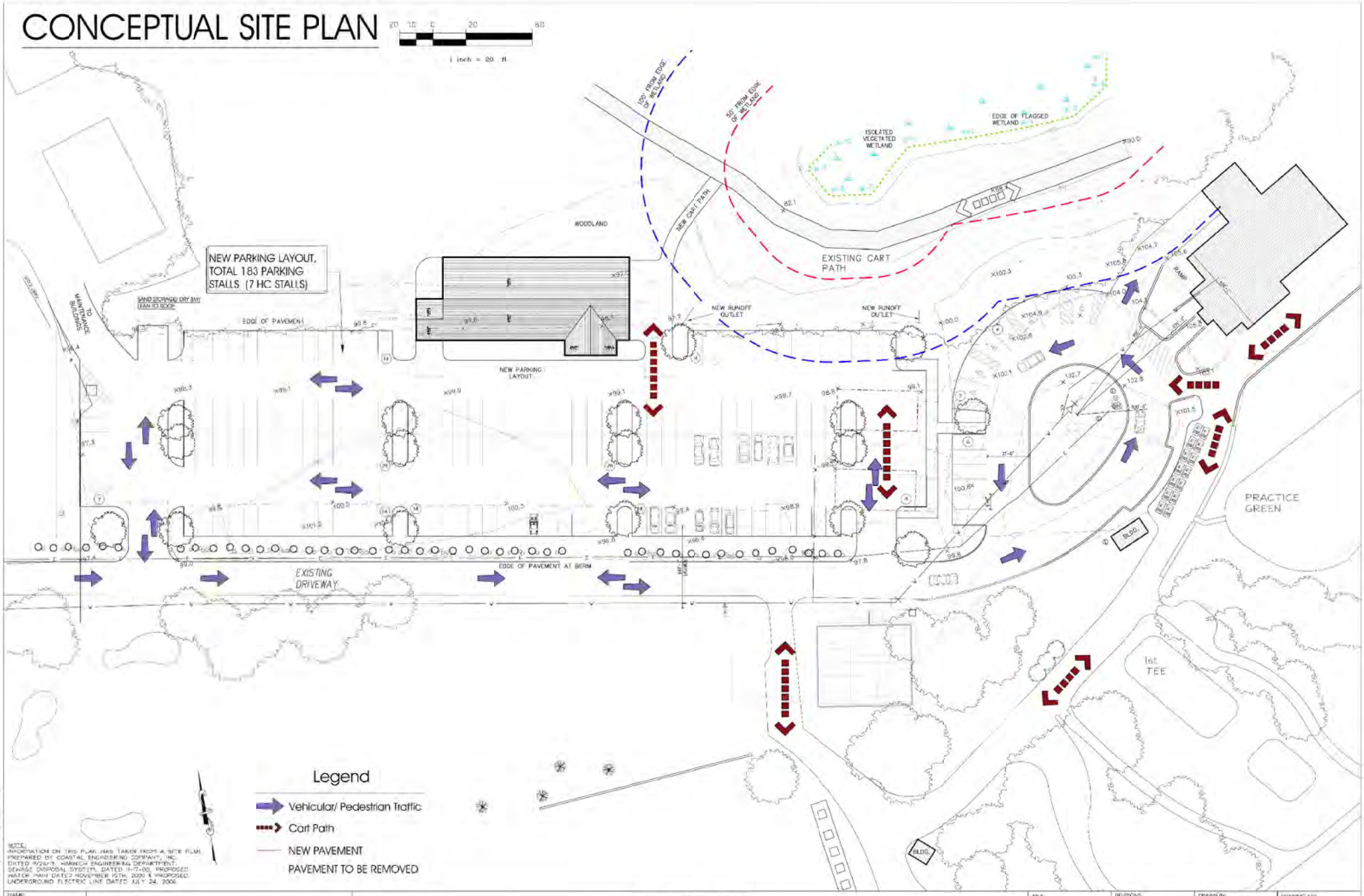
REVISIONS:

DRAWN BY: RY

DATE ISSUED: 12.04.2013

DRAWING NO: SP-3

CONCEPTUAL SITE PLAN



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GOLF CART BUILDING
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB
183 OAK STREET HARWICH, MA

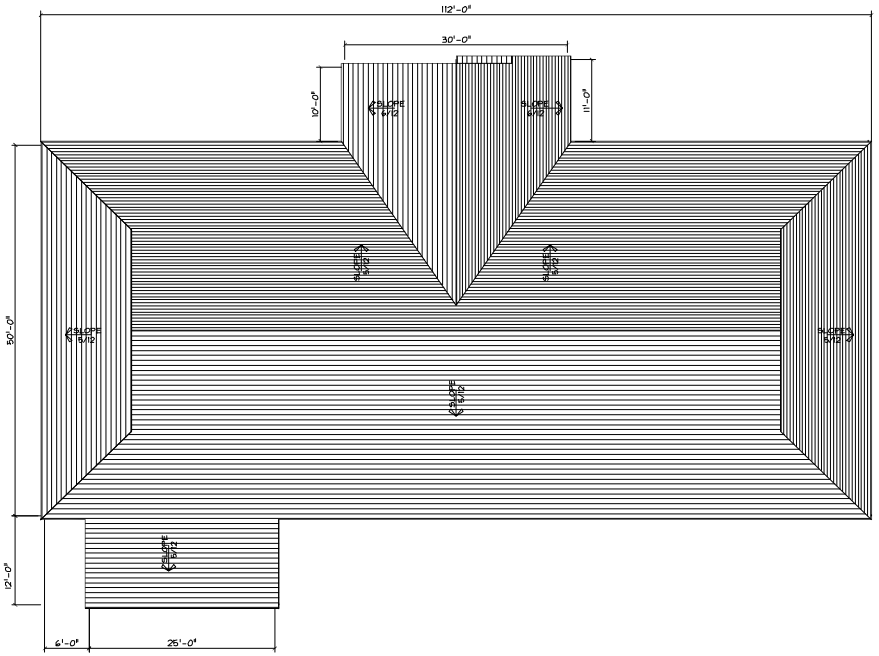
TITLE: PROPOSED SITE PLAN

REVISIONS:

DRAWN BY: BV

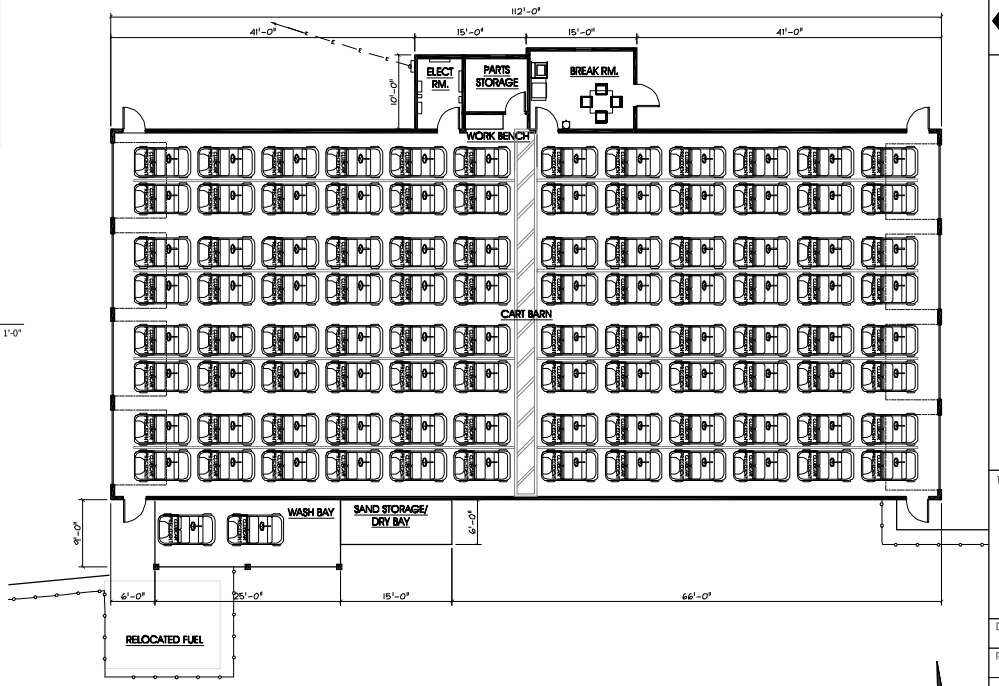
DATE ISSUED: 12.04.2013

DRAWING NO: SP-4



1 ROOF PLAN

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



2 FIRST FLOOR PLAN

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

CART STORAGE AREA	± 5,600 S.F.
ANCILLARY SPACES	± 600 S.F.
TOTAL GROSS S.F.	± 6,200 S.F.

TOTAL CARTS = 96

STAMP:

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GOLF CART STORAGE FACILITY
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB
183 OAK STREET
HARWICH, MA

TITLE:
PROPOSED FLOOR & ROOF PLAN

DATE ISSUED: 12.05.2013

REVISIONS: --

DRAWN BY: RV

PROJECT #: PROJECT NO.

DRAWING NO.:
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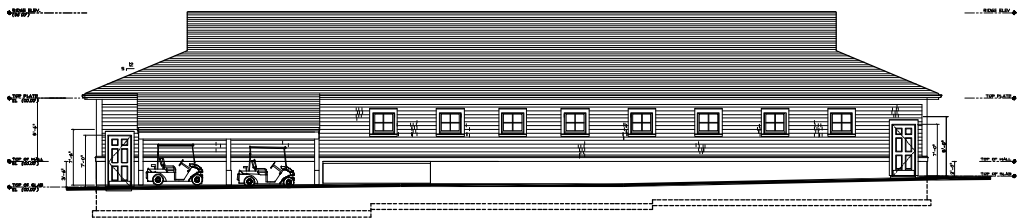
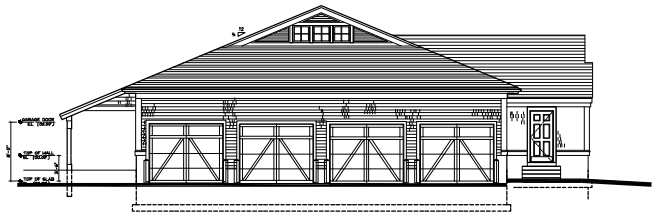
SCHEME 'A"



1 SOUTH ELEVATION

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



2 WEST ELEVATION

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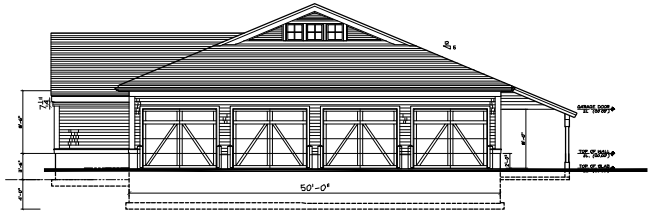

3 EAST ELEVATION

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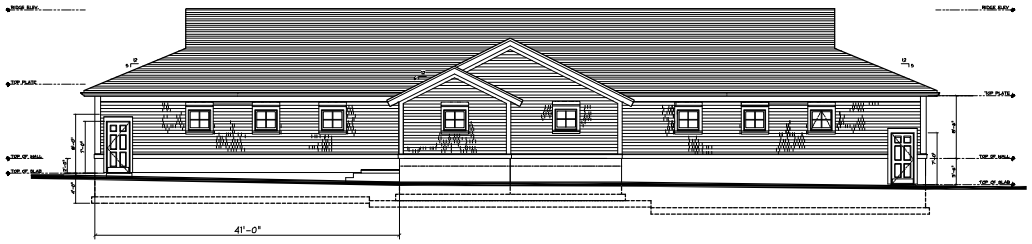

4 NORTH ELEVATION

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

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GOLF CART STORAGE FACILITY
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB

183 OAK STREET
HARWICH, MA

TITLE:

PROPOSED
ELEVATIONS

DATE ISSUED: 12.05.2013

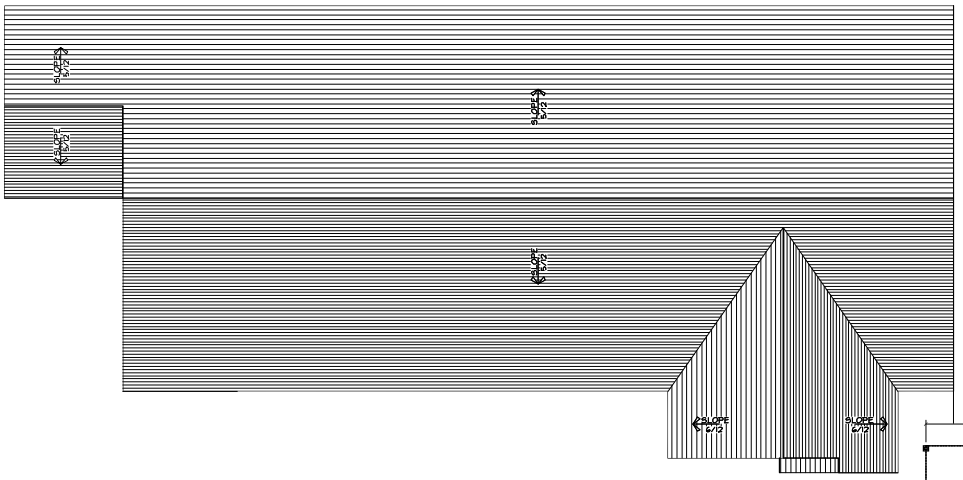
REVISIONS: --

DRAWN BY: RV

PROJECT #: PROJECT NO.

DRAWING NO.:

A2.1
SCHEME 'A"



1 ROOF PLAN

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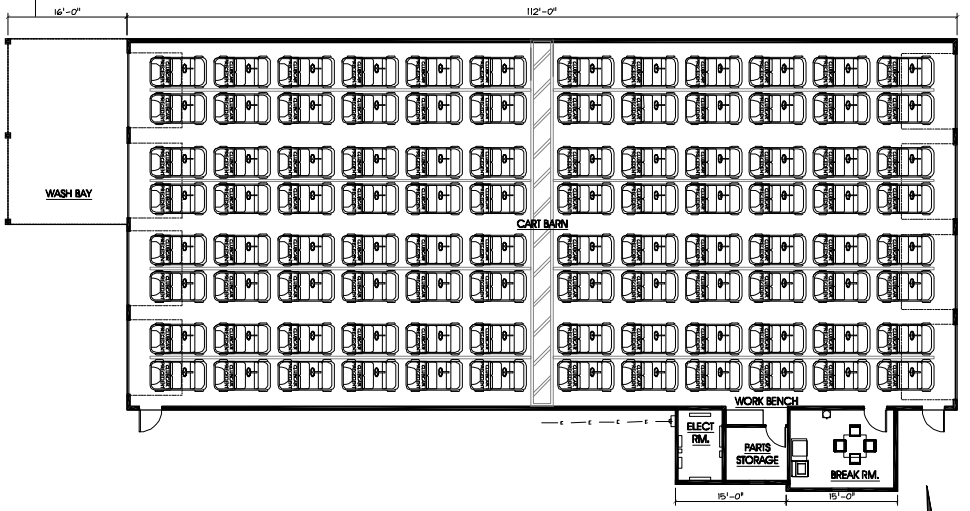

2 FIRST FLOOR PLAN

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ANCILLARY SPACES	± 600 S.F.
TOTAL GROSS S.F.	± 6,200 S.F.

TOTAL CARTS = 96

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GOLF CART STORAGE FACILITY
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CRANBERRY VALLEY GOLF CLUB
183 OAK STREET
HARWICH, MA

TITLE:
PROPOSED
FLOOR & ROOF
PLAN

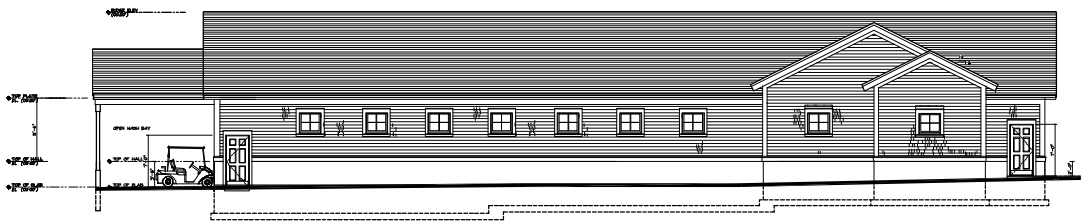
DATE ISSUED: 12.05.2013

REVISIONS: --

DRAWN BY: RV

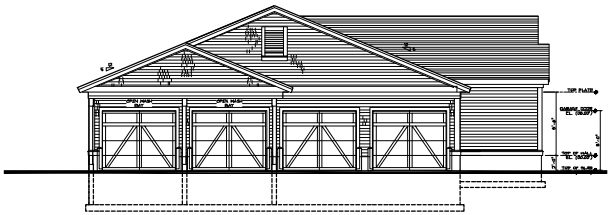
PROJECT #: PROJECT NO.

DRAWING NO.:
A1.1
SCHEME "B"



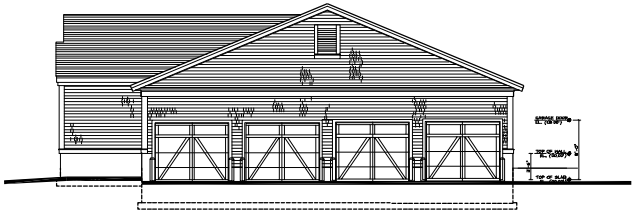
1 SOUTH ELEVATION

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



2 WEST ELEVATION

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



3 EAST ELEVATION

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

4 NORTH ELEVATION

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

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GOLF CART STORAGE FACILITY
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB

183 OAK STREET
HARWICH, MA

TITLE:

PROPOSED
ELEVATIONS

DATE ISSUED:
12.05.2013

REVISIONS:
--

DRAWN BY: RV

PROJECT #: PROJECT NO.

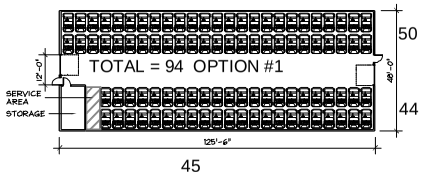
DRAWING NO.:

A2.1
SCHEME "B"

CART BUILDING OPTIONS

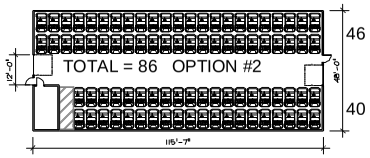
PROPOSED OPTION #1

TOTAL CARTS =94



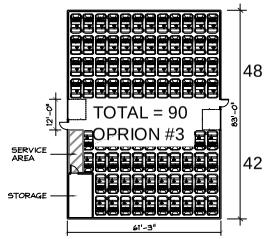
PROPOSED OPTION #2

TOTAL CARTS =86



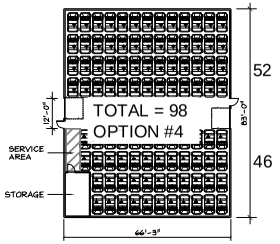
PROPOSED OPTION #3

TOTAL SPACES =90



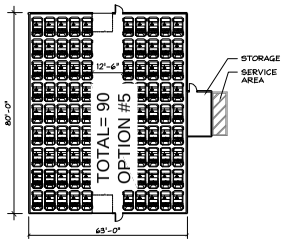
PROPOSED OPTION #4

TOTAL SPACES =98



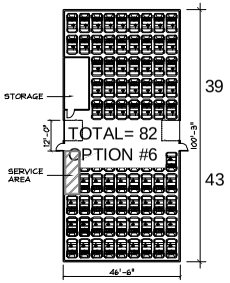
PROPOSED OPTION #5

TOTAL CARTS = 90



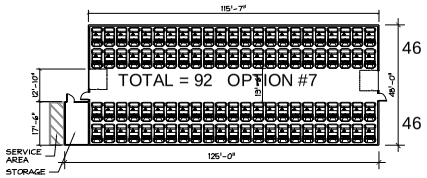
PROPOSED OPTION #6

TOTAL CARTS =82



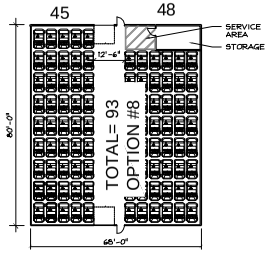
PROPOSED OPTION #7

TOTAL CARTS =92



PROPOSED OPTION #8

TOTAL CARTS = 93



20 10 0 20 60

1 inch = 20 ft.

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GOLF CART STORAGE FACILITY
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB
183 OAK STREET HARWICH, MA

TITLE:
EXISTING SITE PLAN

REVISIONS:
--

DRAWN BY: RV

DATE ISSUED: 12.05.2013

DRAWING NO.:
EX1.0

BROWN LINDQUIST FENUCCIO & RABER ARCHITECTS, INC.

DESIGN MEETING MEMORANDUM

MEETING DATE: 11 November 2013
PROJECT: Cranberry Valley Golf Cart Storage Building
PRESENT: Bob Kingsbury (Committee chair), Clem Smith (Golf Committee chair), Dennis Hoye (Director of Golf), Shawn Fernandez (Superintendent), Building Committee Members, Kurt Raber (BLFR), Tom Swensson (BLFR), Ruben Valenzuela (BLFR)
Distribution: All Attendees, Dave Michniewicz (Coastal Engineering)

DISCUSSION / ACTION ITEMS

New Business:

1. Verified that no building can be built over the existing septic area based on advice from our civil engineer
2. New layout of the parking and rotary were presented along with a plan and elevations.
3. Main issue was not to encroach on the existing practice putting/ chipping green due to an outstanding Bond that still needs to be paid off. Moving the green will not go over well with the Town.
4. Various alternative schemes were proposed to find a viable location for the new Golf Building, i.e. north of parking lot was re-evaluated and confirmed that due to logistics and distance, it is not an ideal location.
5. Other ideas expressed were closing the existing road and using it for the staging area for carts & relocating the green over the septic tank, moving the building further down the street away from the septic area. Issues with this idea were of medical, emergency & fire access and ease of service access to the Club House.
6. The overall cost for building and parking improvements were discussed to be in phased improvements. Building, rotary improvements, then new parking layout.
7. Two story options were discussed and various locations using the site contours to best accommodate a split-level building were considered.
8. Golf course will use Gas Carts in the short term due to lease agreements in place. Electric carts will be considered in the future so building should be able to accommodate the changeover to electric carts.
9. Parking renovation/ construction was discussed to be part of gaining access to the 3-phase electric conduit to be planned for new building, pulling new feeders to new cart building and to see what and where the existing feeders are.

10. Next meeting on December 5th. At 3:00pm with our civil engineer who will discuss what level of improvements made to the parking lot can trigger any zoning or conservation issues. Also, we shall discuss the new building location between the putting green and First Tee and rough building costs.

The above constitutes our understanding of the primary issues discussed at the subject meeting. If there are any errors or omissions, please contact our office as soon as possible.

Respectfully submitted,

Tom Swensson

Revised 5/19/14 tws

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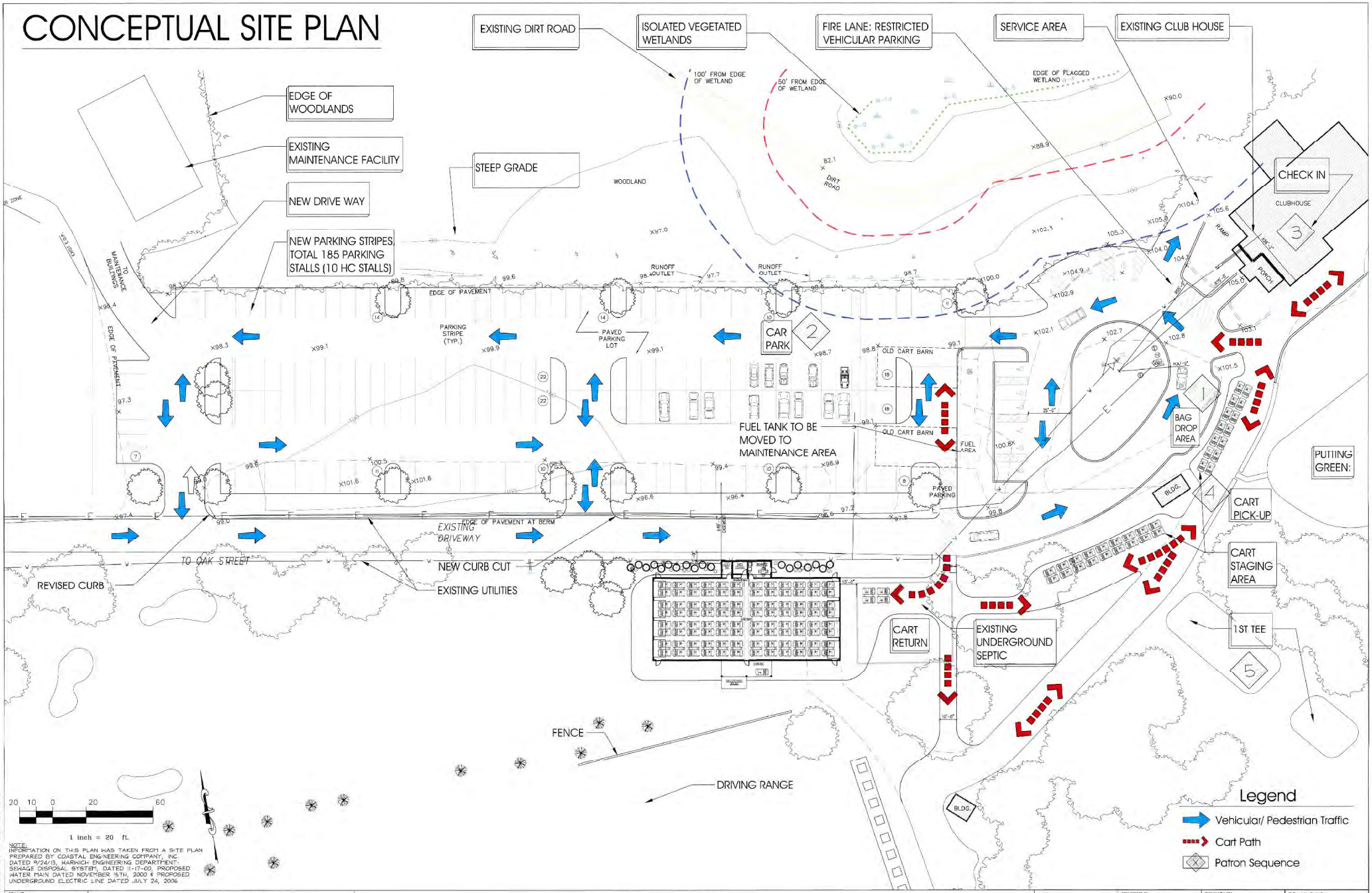
CONCEPTUAL SITE PLAN



NOTE:
INFORMATION ON THIS PLAN WAS TAKEN FROM A SITE PLAN PREPARED BY COASTAL ENGINEERING COMPANY, INC. DATED 9/24/13, HARWICH ENGINEERING DEPARTMENT: SEWAGE DISPOSAL SYSTEM, DATED 11-17-00, PROPOSED WATER MAIN DATED NOVEMBER 15TH, 2000 & PROPOSED UNDERGROUND ELECTRIC LINE DATED JULY 24, 2006

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GOLF CART BUILDING IMPROVEMENTS FOR THE CRANBERRY VALLEY GOLF CLUB
183 OAK STREET HARWICH, MA

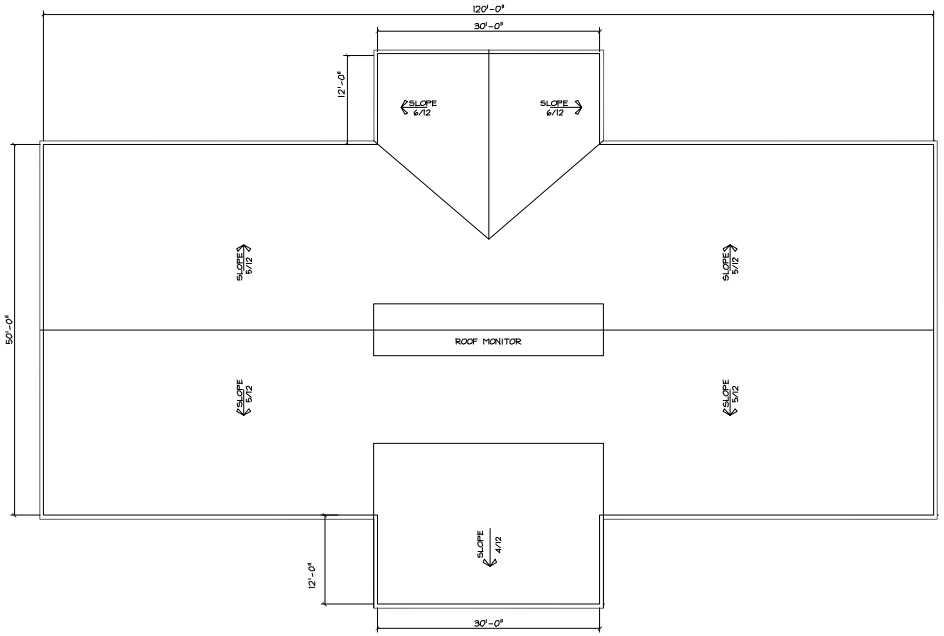
TITLE: EXISTING SITE PLAN

REVISIONS:

DRAWN BY: RV

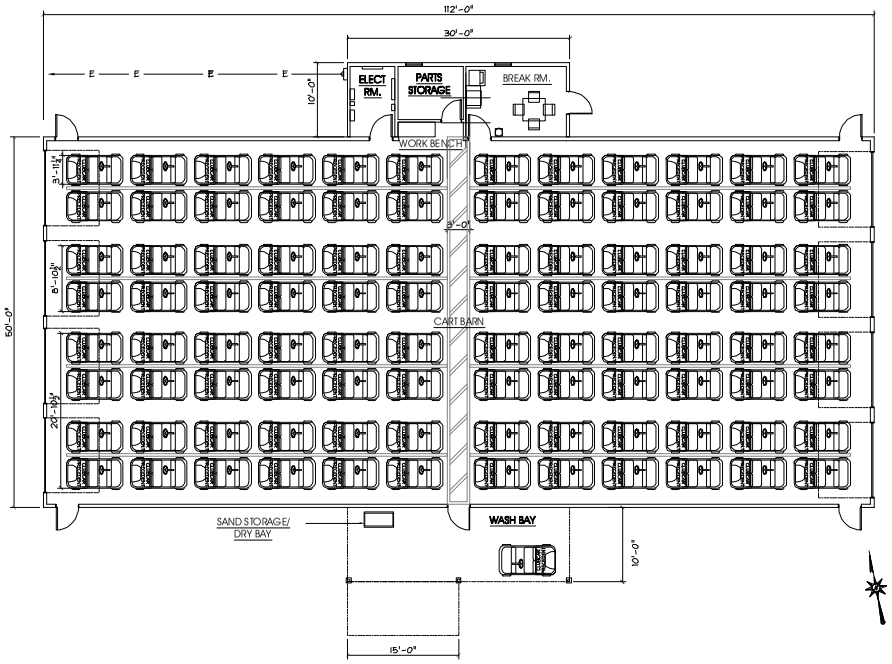
DATE ISSUED: 10.31.2013

DRAWING NO.: SP1.0



1 ROOF PLAN

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



2 FIRST FLOOR PLAN

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

STAMP:

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GOLF CART STORAGE FACILITY
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB

183 OAK STREET
HARWICH, MA

TITLE:

PROPOSED FLOOR & ROOF PLAN

DATE ISSUED: 11.07.2013

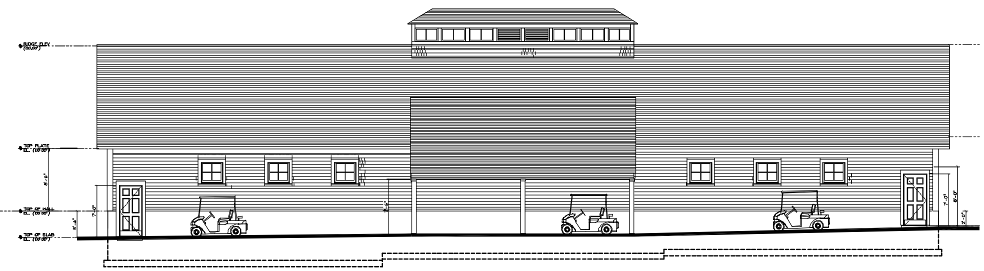
REVISIONS:

DRAWN BY: RV

PROJECT #: PROJECT NO.

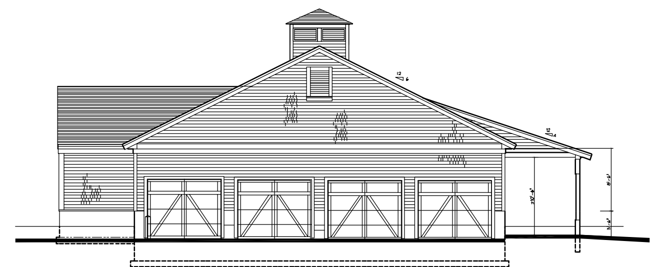
DRAWING NO.:

A1.0



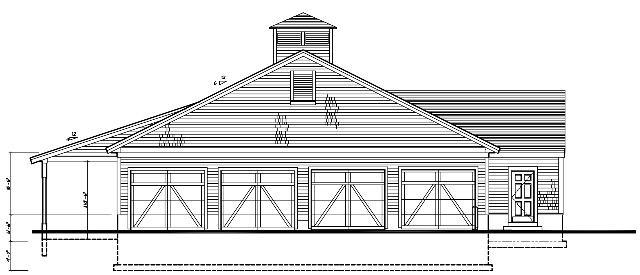
1 SOUTH ELEVATION

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



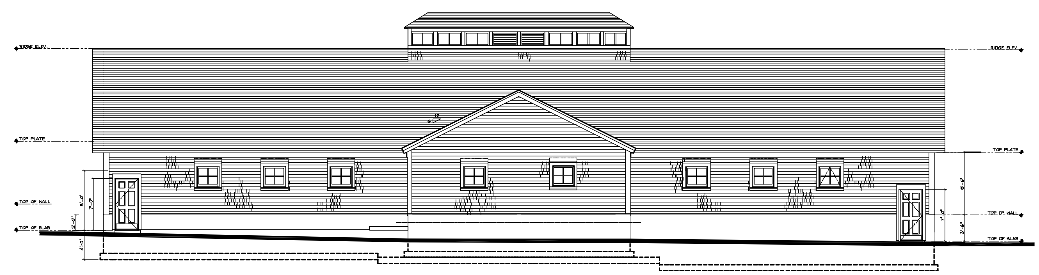
2 WEST ELEVATION

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



3 EAST ELEVATION

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



4 NORTH ELEVATION

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

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GOLF CART STORAGE FACILITY
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB
183 OAK STREET
HARWICH, MA

TITLE:

PROPOSED ELEVATIONS

DATE ISSUED: 11.07.2013

REVISIONS: --

DRAWN BY: RV

PROJECT #: PROJECT NO.

DRAWING NO.:

A2.0

BROWN LINDQUIST FENUCCIO & RABER ARCHITECTS, INC.

DESIGN MEETING MEMORANDUM

MEETING DATE: 18 October 2013
PROJECT: Cranberry Valley Golf Cart Storage Building
PRESENT: Bob Kingsbury (Committee chair), Clem Smith (Golf Committee chair), Dennis Hoye (Director of Golf), Shawn Fernandez (Superintendent), Building Committee Members, Kurt Raber (BLFR), Tom Swensson (BLFR), Ruben Valenzuela (BLFR)
Distribution: All Attendees, Dave Michniewicz (Coastal Engineering)

DISCUSSION / ACTION ITEMS

New Business:

1. Kurt Raber presented proposed locations for new Cart Storage Building at three different locations; one on the north side of the parking lot, one on the west end of the parking lot, and one in approximately the current location. It was decided the scheme for the west end of the lot was a nonstarter because it was too far away. The remaining two schemes seem to be able to the space requirements but not improve traffic issues. However, the scheme for a building at the existing location would more than likely require interrupted operation. A new scheme was proposed by committee members at the current location of the existing septic system. The system was designed for traffic loading so carts could be parked on top of it. If so, it would be a better location with respect to traffic flow. There would only be two areas where auto traffic conflicts with cart traffic. Whether or not a building can be constructed on top of the septic system needs to be investigated with the consulting civil engineer. BLFR will pose the question to the engineer ASAP.
2. Also discussed were the best approach to traffic patterns in the newly proposed location and increasing the parking lot size to accommodate more spaces. BLFR cautioned that the site work cost involved in both items is not included in the allocated amount for the cart building. The increase to the parking lot involves widening the existing lot from ±110ô to 124ô and would utilize the green space between the lot and the entry drive. Given the grade difference between the lot and the drive on the southeast corner of the lot a retaining wall will more than likely be required at that end of the lot. The goal would be to add 40-50 more spaces to the existing 156 spaces (including handicapped spaces). The widening allows for laying out spaces at 90° which results in more spaces than angled parking. This widening of the lot also would allow for correction of subgrade in portions of the lot that have organic fill that creates depressions in the paved surface that need to be repaired continually.
   While reconfiguring the parking lot consideration should be given to establishing the handicapped spaces closer to the entrance to the Clubhouse along with adding as many more

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handicapped spaces as practical. Altering the parking lot may trigger drainage improvements. BLF&R to review this with Coastal Engineering.

3. Sequencing and traffic issues to be addressed:
    - Define and resolve patron sequence problem.
    - Have clear separation of automobile traffic & cart traffic.
    - Delivery trucks arrive at any time causing conflict with carts and autos, timing can be resolved by requesting a specific delivery time.
4. Cart building requirements:
    - Minimum of 6,000 sq. ft. up to 6,500 sq. ft. based on visits by committee members to other cart storage buildings.
    - Lane parking for carts required with possibility of a couple of overhead doors on both ends of building.
    - Include in building a Mechanical Room, Work Bench, Sand Storage, Washer & Dryer in Laundry Room, Small Office, Space for Work Gear, Eating Area and Cart Wash-Down Area. Also need to provide an area outside building but covered for superintendentôs bulk storage.
    - Wash down area catch basin drainage design to be as simple as possible to remove grass clippings. (simple trench drain?)
    - Carts are currently gas and will need to remain gas given the current lease obligations for an additional 5 years.
    - Solar panels wonôt be considered for the moment but future planning for them is required.
5. Cart lease information:
    - Lease is up in March 2014
    - Continue to lease due to revenue share and shop profits @ 71% rentals
    - Long term revenue share currently is a 5 yr. term
    - Possible short term option of 1 year extension could be considered
6. Fuel tank:
   Tank to move to Maintenance Building area (if committee chooses to switch to electric carts). No down time of cart usage required because of existing tank in maintenance buildingôs area that can be used in the interim period.
7. Utility requirements and possibilities:
    - Three Phase electrical stops at the west end of the parking lot and may need to be extended up to the new building. (back charge from utility unknown)
    - Existing 2ò irrigation main off roadway is pumped from a well
    - Use irrigation water/well for cart wash-down and laundry (under review)
    - Use bottled water dispenser for potable water needs
8. Next meeting will be Thursday November 7, 2013 @ 4:00, location to be determined.

The above constitutes our understanding of the primary issues discussed at the subject meeting. If there are any errors or omissions, please contact our office as soon as possible.

Respectfully submitted,

Tom Swensson

Revised 5/19/14 tws

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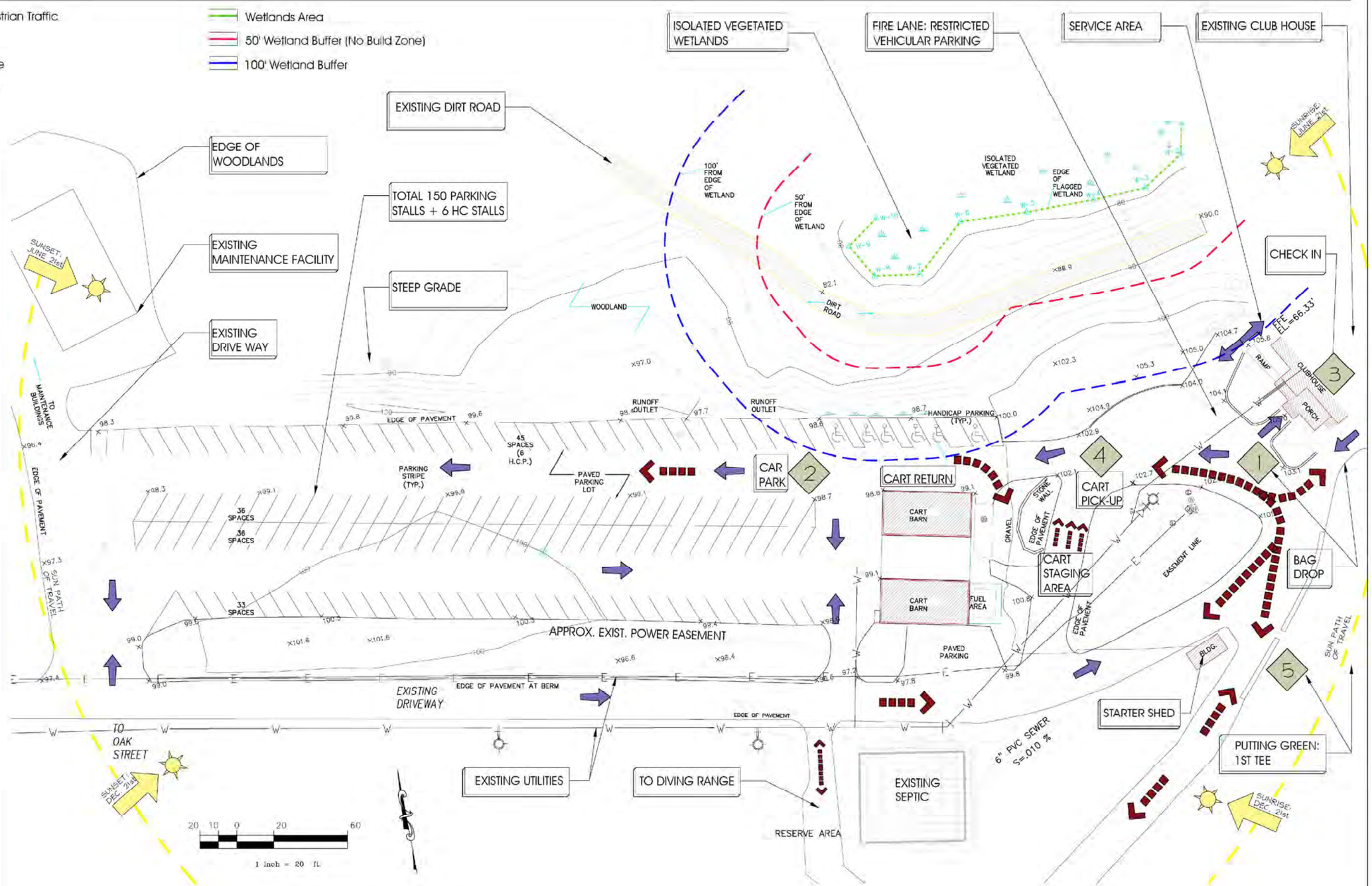
CONCEPTUAL SITE ANALYSIS

Legend

- Vehicular/ Pedestrian Traffic
- Cart Path
- Patron Sequence
- Solar Orientation
- Wetlands Area
- 50' Wetland Buffer (No Build Zone)
- 100' Wetland Buffer

PROS:

CONS:



BROWN LINDQUIST FENUCCIO & RABER ARCHITECTS, INC

GOLF CART BUILDING
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB
183 OAK STREET HARWICH, MA

TITLE: EXISTING SITE PLAN

REVISIONS:

DRAWN BY:

DATE ISSUED:

DRAWING NO. EX1.0

Proposed Plans & Elevations

CONCEPTUAL SITE PLAN

20 10 0 20 60

1 inch = 20 ft.

LIMIT OF WORK AREA, PHASE ONE

MODIFIED EXISTING PARKING LAYOUT, TOTAL 156 PARKING STALLS (8 HC STALLS)

100' FROM EDGE OF WETLAND

50' FROM EDGE OF WETLAND

NEW CART PATH

RETAINING WALL

WOODLAND

FUEL DEPOT

WASH BAY

EDGE OF PAVEMENT

EXISTING CART PATH

ISOLATED VEGETATED WETLAND

EDGE OF FLAGGED WETLAND

NEW RUNOFF OUTLET

EXISTING CLUB HOUSE

RAMP

GRANITE BOLLARDS

NEW CURB

12" HIGH CURB

EXISTING CART STAGING AREA TO REMAIN (45 CARTS)

NEW WALKWAY

PRACTICE GREEN

BLDG.

EXISTING DRIVEWAY

EDGE OF PAVEMENT AT BERM

EDGE OF PAVEMENT

EXISTING SEPTIC LEACHING FIELD

RESERVE AREA

1st TEE

Legend

- Vehicular/ Pedestrian Traffic
- Cart Path
- NEW PAVEMENT
- PAVEMENT TO BE REMOVED

NOTE:
INFORMATION ON THIS PLAN WAS TAKEN FROM A SITE PLAN PREPARED BY COASTAL ENGINEERING COMPANY, INC. DATED 9/24/13, HARWICH ENGINEERING DEPARTMENT: SEWAGE DISPOSAL SYSTEM, DATED 11-17-00, PROPOSED WATER MAIN DATED NOVEMBER 15TH, 2000 & PROPOSED UNDERGROUND ELECTRIC LINE DATED JULY 24, 2006

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PROPOSED GOLF CART BUILDING
CRANBERRY VALLEY GOLF CLUB
TOWN OF HARWICH
183 OAK STREET
HARWICH, MA

TITLE: PROPOSED SITE PLAN W/ EXISTG PARKING

REVISIONS: --

DRAWN BY: RV/TWS

DATE ISSUED: 5.19.14

DRAWING NO.: SP-5

CONCEPTUAL SITE PLAN

20 10 0 20 60

1 inch = 20 ft.

LIMIT OF WORK AREA, PHASE ONE

NEW PARKING LAYOUT, TOTAL 184 PARKING STALLS

100' FROM EDGE OF WETLAND

50' FROM EDGE OF WETLAND

NEW CART PATH

RETAINING WALL

RETAINING WALL

FUEL DEPOT

WASH BAY

WOODLAND

EDGE OF FLAGGED WETLAND

ISOLATED VEGETATED WETLAND

EXISTING CART PATH

NEW RUNOFF OUTLET

EDGE OF PAVEMENT

TO MAINTENANCE BUILDINGS

EXISTING CLUB HOUSE

RAMP

NEW CURB

EXISTING CART STAGING AREA TO REMAIN, (32 CARTS)

ADDITIONAL STAGING AREA (14 CARTS)

BAG DROP OFF

PRACTICE GREEN

EXISTING DRIVEWAY

EDGE OF PAVEMENT AT BERM

EDGE OF PAVEMENT

EXISTING SEPTIC LEACHING FIELD

1st TEE

BLDG.

BLDG.

Legend

- Vehicular/ Pedestrian Traffic
- Cart Path
- NEW PAVEMENT
- PAVEMENT TO BE REMOVED

NOTE:
INFORMATION ON THIS PLAN WAS TAKEN FROM A SITE PLAN PREPARED BY COASTAL ENGINEERING COMPANY, INC. DATED 9/24/13, HARWICH ENGINEERING DEPARTMENT: SEWAGE DISPOSAL SYSTEM, DATED 11-17-00, PROPOSED WATER MAIN DATED NOVEMBER 15TH, 2000 & PROPOSED UNDERGROUND ELECTRIC LINE DATED JULY 24, 2006

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PROPOSED GOLF CART BUILDING
CRANBERRY VALLEY GOLF CLUB
TOWN OF HARWICH

183 OAK STREET
HARWICH, MA

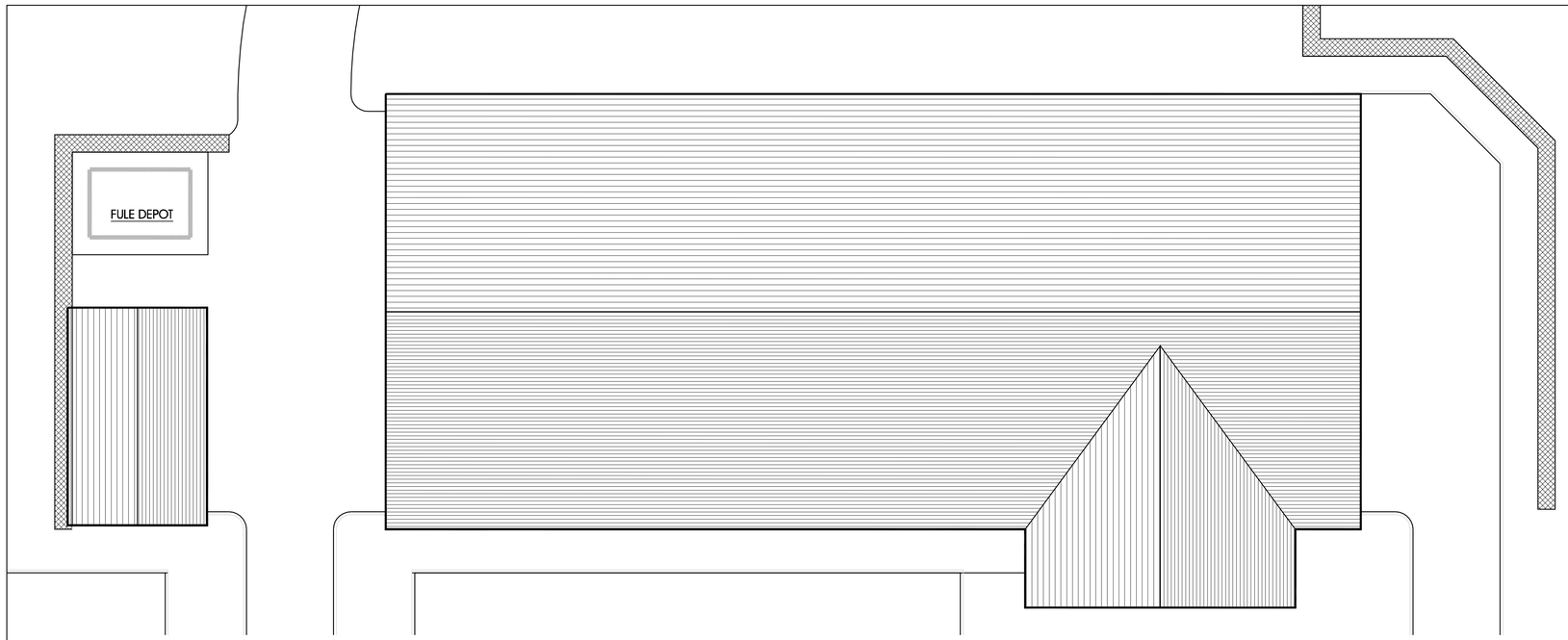
TITLE: SITE PLAN W/ PROPOSED FUTURE PARKING EXPANSION

REVISIONS: --

DRAWN BY: RV

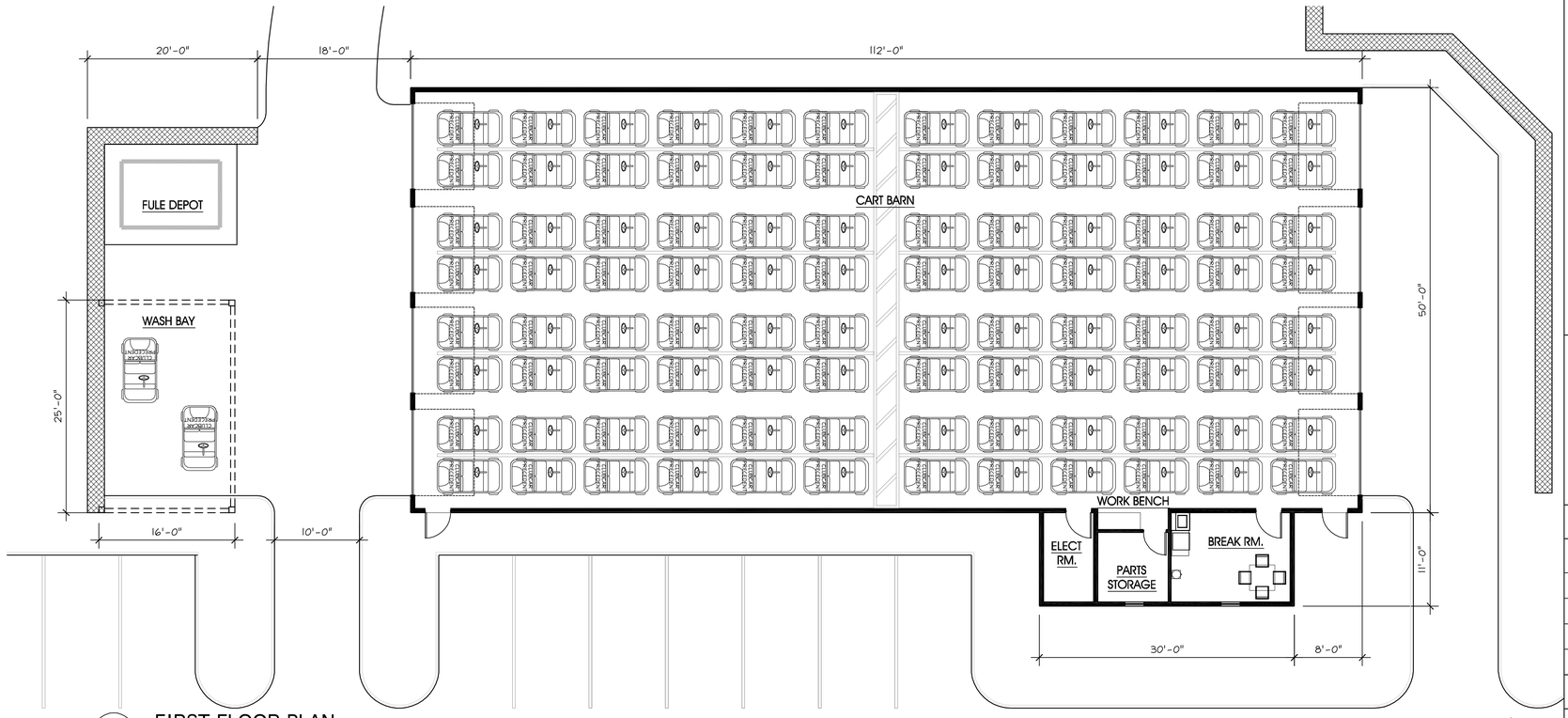
DATE ISSUED: 12.12.2013

DRAWING NO.: SP-5 ALT.



1 ROOF PLAN

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



2 FIRST FLOOR PLAN

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

CART STORAGE AREA	± 5,600 S.F.
ANCILLARY SPACES	± 330 S.F.
GROSS S.F.	± 5,930 S.F.
WASH BAY	± 400 S.F.
TOTAL G.S.F.	± 6,330 S.F.

TOTAL CARTS = 96

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GOLF CART STORAGE FACILITY
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB
183 OAK STREET
HARWICH, MA

TITLE:

PROPOSED FLOOR & ROOF PLAN

REVISED FINAL SCHEME

DATE ISSUED: 12.05.2013

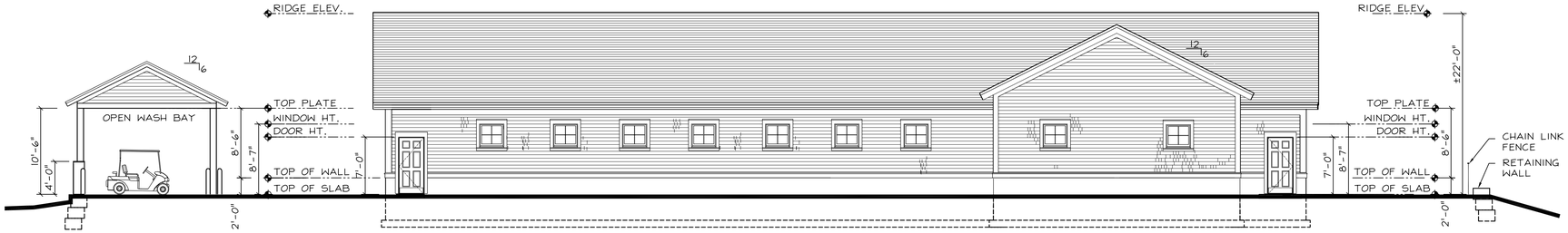
REVISIONS:

DRAWN BY: TS, RV

PROJECT #: PROJECT NO

DRAWING NO.:

A1.1

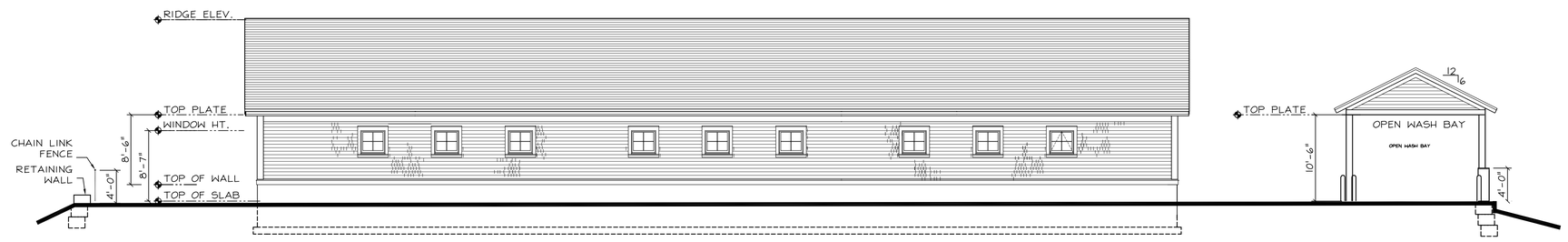


1 SOUTH ELEVATION

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

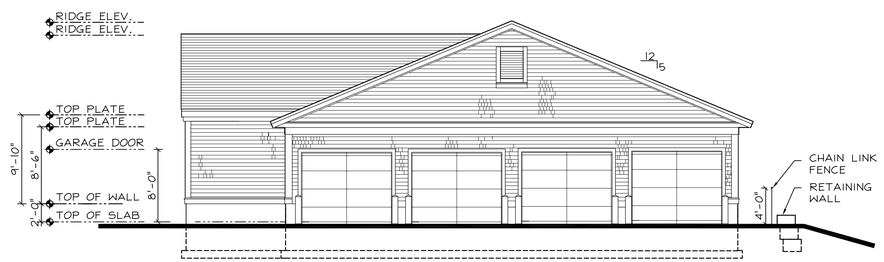
2 WEST ELEVATION

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



4 NORTH ELEVATION

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



3 EAST ELEVATION

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

13 May 2014 Tom Swenson AIA Standard_5.stb
H:_Current Projects\Municipal\Cranberry Valley Golf Club\Drawings_Current Dwgs_\Cranberry V Golf Elev-12-5-13, Revised.dwg

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GOLF CART STORAGE FACILITY
IMPROVEMENTS FOR THE
CRANBERRY VALLEY GOLF CLUB
183 OAK STREET
HARWICH, MA

TITLE:

PROPOSED ELEVATIONS

REVISED FINAL SCHEME

DATE ISSUED: 12.05.2013

REVISIONS:

DRAWN BY: TS, RV

PROJECT #: PROJECT NO

DRAWING NO.:

A2.1

Town of Harwich
Cranberry Valley Golf Club - Golf Cart Storage Building
OVERALL PROJECT BUDGET

The following preliminary cost estimate is based upon the current Building and Energy Codes. We would recommend that the budget be updated periodically as the design and construction documents are further developed. This estimate was prepared in May of 2014 andshould be adjusted accordingly over time.

Construction Expenses				**Low Range**	**High Range**
Building Construction Cost:					
- Cart Storage Building	5930			$ 889,500.00	$ 1,186,000.00
- Cart Wash-Off Area	400			$ 60,000.00	$ 80,000.00
Total Construction Expenses				**$ 949,500.00**	**$ 1,266,000.00**
	6330 sf		average cost/sf	$ 150.00	$ 200.00
Miscellaneous Project Expenses & Soft Costs					
Consultant Expenses:					
Architectural Fees (does not include conceptual phase fees to date)			Estimate	$ 63,700.00	$ 77,200.00
Structural Engineering			Estimate	$ 8,000.00	$ 12,000.00
Mechanical Electrical & Plumbing Engineering including Fire Protection			Estimate	$ 7,500.00	$ 10,000.00
Survey & Civil Engineering (Coastal Engineering)			Estimate	$ 15,000.00	$ 20,000.00
Initial Soil Borings & Geotechnical Report (by Briggs)			Estimate	$ 4,000.00	$ 6,000.00
Materials Testing During Construction			Estimate	$ 5,000.00	$ 7,500.00
Estimated Reimbursable Expenses (i.e. postage, misc. printing)			Estimate	$ 1,000.00	$ 1,500.00
Printing of Bid Documents			Estimate	$ 1,500.00	$ 1,500.00
Owner's Direct Expenses:					
Legal Representation (during permitting, bonding, etc.)				not included	not included
Utility Backcharges			Estimate	$ 5,000.00	$ 10,000.00
Landscaping Design & Installation (by Owner ????)			Estimate	$ 10,000.00	$ 20,000.00
Exterior Building Signage			Estimate	$ 1,500.00	$ 2,000.00
Security System				not included	not included
Telephone / Computer Data Wiring & Hardware				not included	not included
Total of Misc. Project Expenses				**$ 122,200.00**	**$ 167,700.00**
Sub-Total				**$ 1,071,700.00**	**$ 1,433,700.00**
Project Contingency @	5.0%			$ 53,585.00	$ 71,685.00
Inflation Escalator	4%/year	x	2 years (2014-2016)	$ 85,736.00	$ 114,696.00
Estimated Total Project Costs				**$ 1,211,021.00**	**$ 1,620,081.00**
	6,330 sf		average cost/sf	$ 191.31	$ 255.94
Average of Low and High Range				**$**	**1,415,551.00**

Notes:

INCLUDED:
Phased Project Delivery
Demolition and Removal of Existing cart Storage Builing and Foundation
Relocation of the Existing Fuel Tankto the Turf Maint. Yard

DOES NOT INCLUDE:
New parking area immediately parallel to the entry drive
Generator & Transfer Switch
Concealed Hazardous Materials Testing or Removal
Removal of unsuitable soils material

Bryant Construction Services
258 Main Street, Suite B6
Buzzards Bay, MA 02532
508-776-8613

PROJECT: Cranberry Valley Golf Club **Date:** **6-May-14**
Harwich, MA
Golf Cart Storage Facility and Wash Bay
Conceptual Budget Estimate

Description	Quant.	Unit	Unit Cost	Total
General Conditions				$155,600.00
Winter Conditions				$60,000.00
Site work				$239,300.00
Concrete Foundations				$47,000.00
Concrete Flatwork				$37,600.00
Concrete Reinforcing Steel				$28,500.00
Ready-Mix Concrete				$31,700.00
Masonry				None
Structural Steel Rigid Frame and Bracing				$104,400.00
Misc. Metals				$5,200.00
Rough Carpentry- Material and Labor				$175,100.00
Cabinets and Casework				$400.00
Interior Finish Carpentry-Material and Labor				$6,600.00
Thermal and Moisture				$20,200.00
Exterior Siding and Trim-Material and Labor				$54,200.00
Windows				$11,700.00
Roofing				$50,300.00
Interior Glass and Glazing				None
Doors/Frames and Hardware				$5,600.00
Drywall Systems				$6,800.00
Flooring				$7,300.00
Acoustical Ceiling				None
Painting				$10,800.00
Specialties				$500.00
Over Head Doors				$17,600.00
Fire Protection				None
Plumbing				None
HVAC				None
Electrical				$78,400.00
SUBTOTAL				$1,154,800.00
Insurance 1% +/-				$1,200.00
Building Permit (.50 per sf: 6030sf =$3115.00)+/-				$3,100.00
Fee +/-			6.000%	$69,600.00
Total Conceptual Budget Cost				$1,228,700.00
Bond Cost (Add 1% +/- of the total) $12,300.00)				$0.00
Contingency				$0.00
				$0.00

Cost per Square Foot @ 6330 SF **$194.11**

Building Description:
Cast in Place concrete foundation, slab on grade, ridged steel Frame, wood stud walls and wood roof truss system

Building Floor Areas:

Cart Storage Building		
Cart Storage Area	**5600**	**SF**
Ancillary Area	**330**	**SF**
Total	**5930**	**SF**
Wash Bay Structure:		
Total Wash Bay Slab Area	**400**	**SF**
Total Area Cart Storage and Wash Bay Structure	**6330**	**sf**
Total Exterior Perimeter of Cart Storage Building:	**346**	**LF**
Total Exterior Perimeter of Was Bay Structure:	**82**	**LF**

Work Not Included:

Removal of ledge and boulders 1 cy or larger

Hazardous materials testing, removal and disposal.

Replace of unsuitable soils

Landscaping

Wash water recycling system equipment

P and P Bonds

Utility Company connection fees and back charges

Furniture, Fixtures and Equipment

Plumbing, sprinkler and HVAC systems

Clarifications:

Prevailing Wage Rates are included

Budget base on drawings dated 12-05-2013 and related sketches received April 24, 2014.

DIVISION - General Conditions

Description	Quant.	Unit	Unit Cost	Total
Construction Personnel				
Full Time Superintendent	20	wks.	$3,430.00	$68,600.00
Project Manager 1/2 time	10	wks.	$3,950.00	$39,500.00
Field Office Expense				
Cell Telephone	5	mo.	$100.00	$500.00
Wireless PC Access	5	mo.	$110.00	$550.00
Field Office Equipment	5	mo.	$20.00	$100.00
First Aid Supplies	20	wks	$25.00	$500.00
Travel Expenses- Super	20	wks	$110.00	$2,200.00
Travel Expenses -Project Manager	10	wks	$110.00	$1,100.00
Project Closeout / as-built	1	ls	$2,000.00	$2,000.00
Temporary Protection				
Temp. Fencing	650	lf	$6.00	$3,900.00
Project Sign	1	ea	$900.00	$900.00
Job Site Signs	1	ls	$200.00	$200.00
Temporary Facilities				
Office Trailer	5	mo.	$250.00	$1,250.00
Set up and Return Office Trailer	1	ls	$1,000.00	$1,000.00
40' Storage Box	5	mo.	$125.00	$625.00
Job Box with Small Tools	5	mo.	$150.00	$750.00
Survey / Layout	1	ls	$1,900.00	$1,900.00
Temporary Utilities and Sanitary				
Temp. Power	5	mo.	$600.00	$3,000.00
Temp. Water	5	mo.	$200.00	$1,000.00
Temp. Sanitary	5	mo.	$290.00	$1,450.00
Temp. Fire Extinguisher	2	ea	$50.00	$100.00
Winter Conditions				
Snow removal, temp heat, etc.	3	mo	$5,000.00	$15,000.00
Clean Up				
Final Cleaning	1	ls	$1,500.00	$1,500.00
Dumpsters	16	ea	$500.00	$8,000.00
SUBTOTAL				$155,600.00
LUMP SUM PRICE				$0.00
TOTAL				**$155,600.00**

DIVISION - Demolition

Description	Quant.	Unit	Unit Cost	Total
Demolish and disposal of the existing storage buildings, slabs on grade, foundations and paving. (2 buildings at 1000sf +/- each)	20000	mo	$3.00	$60,000.00
SUBTOTAL				$60,000.00
LUMP SUM PRICE				
TOTAL				**$60,000.00**

DIVISION - Site work

Description	Quant.	Unit	Unit Cost	Total
Site Preparation				
Erosion and sedimentation control	650	lf	$6.50	$4,225.00
Tree and stump removal	0.6	ac	$5,000.00	$3,000.00
Strip 12" of topsoil and stock pile on site (25000sf +/-)	92	cy	$10.00	$920.00
Saw cut and remove the existing paving 165 x 20 = 3300sf +/-	3300	sf	$1.00	$3,300.00
Cuts and Fills				
Remove and replace any unsuitable soils material (Not included)			Not Included	
Import material to bring the buildings and drives to sub-grade	4000	cy	$16.00	$64,000.00
On-site materials shall be used for backfill material			Included	
Dewatering (Excess dewatering is not included)			Not included	
Building Excavation and Backfilling				
E/B for new concrete cart storage building foundation	346	lf	$20.00	$6,920.00
E/B for 8 exterior column footings for rigid frame	8	ea	$150.00	$1,200.00
E/B for new concrete wash bay structure foundation	82	lf	$20.00	$1,640.00
Gravel				
New 6" gravel below cart storage building slab on grade	115	cy	$30.00	$3,450.00
New 12" gravel below exterior wash bay slab on grade	15	cy	$30.00	$450.00
New 6" gravel base below new walks			None	
New 12" gravel base below new paving	240	cy	$30.00	$7,200.00
Site Utilities				
Drainage				
Drainage system in existing parking area to remain			No work	
New runoff outlet (Work is unclear at this time)	1	ls	$3,000.00	$3,000.00
Trench drains along the front of the O.H. Doors (Includes trenching.)	100	lf	$90.00	$9,000.00
Gas and oil separators	2	ea	$900.00	$1,800.00
Drywells	2	ea	$600.00	$1,200.00
Sewer/Septic				
None			None	
Sprinkler Piping				
None			None	
Domestic Water				
E/B for 1" cold water line to the wash bay	150	lf	$30.00	$4,500.00
Below grade 1" water piping, valves and hose bib.	150	lf	$35.00	$5,250.00
Gas Service				
None			None	
Electrical Service				
E/B for under ground electrical service to the cart storage building, wash bay and fuel storage tank. (Power shall come from the existing on site service)	200	lf	$30.00	$6,000.00
(2) New hand holes for the new power	2	cy	$750.00	$1,500.00
Concrete encasement for the secondary service below paved areas.	30	cy	$200.00	$6,000.00
Site Lighting				
Site Lighting fixtures			None	
Site Improvements				
Paving				
3-1/2" Bit. Paving at new drives and lot	720	sy	$20.00	$14,400.00
Bit. Concrete berms			None	
Parking area graphics	1	ls	$1,500.00	$1,500.00
Parking HP signage			None	
Misc. traffic control signage			None	
Concrete Block Retaining Walls				
Cart Storage Building				
East side of building (100lf x 10' high average)	1000	sf	$50.00	$50,000.00
Wash Bay Structure				
West Side of structure (65lf x 6' high average)	400	sf	$50.00	$20,000.00

Landscaping					
Re-spread existing topsoil on lawn areas	11650	sf		$1.00	$11,650.00
Remaining topsoil shall remain the property of the owner			By owner		
Trees, shrubs, ground cover, etc. Allowance			By the owner		
Irrigation system			By the owner		
Relocated Fuel Storage Tank					
Disconnect the existing electrical			w/Electrical		
Relocate the fuel storage tank	1	All		$1,500.00	$1,500.00
Demolish the existing Concrete pad and stone.	100	sf		$5.00	$500.00
12" gravel base below the concrete pad	5	cy		$30.00	$150.00
Place and finish a new 10' x 10' x 12" concrete pad. Pad to be sloped to a drain in the center of the wash pad.	100	sf		$7.50	$750.00
Ready mix concrete	5	cy		$115.00	$575.00
Stone maintaince strip around the perimeter of the concrete pad	25	cy		$30.00	$750.00
New or relocated CLF and Gate	60	lf		$50.00	$3,000.00
New power to the relocated tank			w/Electrical		
Sub-Total					$239,300.00
SUBCONTRACTOR PRICE					$0.00
TOTAL					**$239,300.00**

DIVISION - Concrete Foundations

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Form and place 10" X 24" continuous footings	234	lf	$20.00	$4,680.00
Form and place 12" X 30" continuous footings	112	lf	$20.00	$2,240.00
Form and place 5' high x 10" thick foundation walls	182	lf	$40.00	$7,280.00
Form and place 6'-6" high x 10" thick foundation walls	52	lf	$40.00	$2,080.00
Form and place 9' high x 12" thick foundation walls	112	lf	$80.00	$8,960.00
Form and Place column footings at rigid frame columns	10	ea	$250.00	$2,500.00
Form and place the pilasters at Rigid frame columns	10	ea	$50.00	$500.00
Interior Continuous Footings			None	
Concrete pump for 9' walls	1	ea	$1,200.00	$1,200.00
Install Damproofing on foundation walls	2150	sf	$0.50	$1,075.00
Install rigid insulation on foundation walls	2150	sf	$1.50	$3,225.00
Tie re-steel all foundations	18900	lbs	$0.40	$7,543.00
Wash Bay Structure				
Form and place 10" X 24" continuous footings at perimeter	82	lf	$20.00	$1,640.00
Form and Place 48" x 8" frost wall at perimeter	82	lf	$40.00	$3,280.00
Damproofing, vapor barrier and insulation			None	
Tie re-steel all foundations	1950	lbs	$0.40	$763.00
SUBTOTAL				$47,000.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$47,000.00**

DIVISION - Concrete Flatwork

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Place and finish 6" slab on grade at cart storage area (slab to be sloped towards the O.H. Doors)	5600	sf	$3.00	$16,800.00
Place and finish 4" slab on grade at Ancillary spaces	330	sf	$3.00	$990.00
Apply dust sealer on slab	5930	sf	$1.10	$6,523.00
Concrete pump for slab on grade			None	
Place vapor barrier w/10% laps	6550	sf	$0.50	$3,281.50
Place 1 layer of welded wire mesh w/20% laps in cart storage area	7120	sf	$0.25	$1,780.00
Place 1 layer of welded wire mesh w/20% laps in Ancillary spaces	400	sf	$0.25	$100.00
Install reinforcing steel in the slab to tie the footings and walls at the rigid frame	10	ea	$300.00	$3,000.00
Saw cut control joints in slab	6200	sf	$0.50	$3,100.00
Install rigid insulation below perimeter slab on grade	1520	sf	$0.25	$380.00
Wash Bay Structure				
Place and finish 25' x 16'x 8" concrete pad. (Pad to be sloped to the center from all sides)	400	sf	$3.00	$1,200.00
Form and place a concrete waste water system pit below the slab to collect wash water	1	ls	$275.00	$275.00
Place 1 layer of welded wire mesh w/20% laps	480	sf	$0.25	$120.00
Install rigid insulation below entire slab on grade			None	
Install vapor barrier			None	
SUBTOTAL				$37,600.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$37,600.00**

DIVISION - Concrete Reinforcing

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building			None	
Reinforcing Steel for foundations (126cy x 150#/cy = 18900#)	18900	lbs	$1.00	$18,900.00
Install Resteel			w/Foundations	
Cart storage: 6 x 6 10/10 WWM slab on grade (One layer)	7120	sf	$1.00	$7,120.00
Ancillary space slab 6 x 6 10/10 WWM slab on grade (One layer)	400	sf	$1.00	$400.00
Install Mesh			w/Flatwork	
Wash Bay Structure				
Reinforcing Steel for foundations (13cy x 150#/cy = 1950#)	1650	lbs	$1.00	$1,650.00
Install Resteel			w/Foundations	
Wash Bay: 6 x 6 10/10 WWM slab on grade (One layer)	440	sf	$1.00	$440.00
Install Mesh			w/Flatwork	
SUBTOTAL				$28,500.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$28,500.00**

DIVISION - Ready-Mix Concrete

Description	Quant.	Unit	Unit Cost	Total
Ready Mix Concrete 3000 PSI for foundations				
Cart Storage Building				
Continuous perimeter footings	34	cy	$115.00	$3,910.00
Foundation walls	75	cy	$115.00	$8,625.00
Exterior column footings and pilasters at rigid frame	20	cy	$115.00	$2,296.00
Wash Bay Structure				
Continuous perimeter footings	5	cy	$115.00	$575.00
Foundation walls	8	cy	$115.00	$920.00
Ready Mix Concrete 4000 PSI for slabs				
Cart Storage Building				
6" Slab on grade in cart storage area	110	cy	$120.00	$13,200.00
4" Slab on grade in Ancillary spaces	8	cy	$120.00	$960.00
Wash Bay Structure				
8" Slab on grade	10	cy	$120.00	$1,200.00
SUBTOTAL				$31,700.00
SUBCONTRACTOR PRICE				
TOTAL				**$31,700.00**

DIVISION - Masonry

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
None			None	
Wash Bay Structure				
None			None	
SUBTOTAL				$0.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$0.00**

DIVISION - Structural Steel

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Furnish and erect a Steel rigid framing system at cart storage area only.	5800	sf	$18.00	$104,400.00
Bearing plate, leveling plate, anchor bolts, etc			Included	
Bracing for wind and seismic, etc			Included	
B-Deck on the roof.			Not Included	
Side wall girts and bracing			Included	
Erect steel rigid frame and bracing			Included	
Wash Bay Structure				
Structural Steel			None	
SUBTOTAL				$104,400.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$104,400.00**

DIVISION - Misc. Metals

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Misc. Metals at OH Doors	8	ea	$250.00	$2,000.00
Bollards in front of O.H. Doors	10	ea	$150.00	$1,500.00
Wash Bay Structure				
Steel frame and grating at waste water system	1	ea	$200.00	$200.00
Bollards at wash bay structure and fuel depot	10	ea	$150.00	$1,500.00
SUBTOTAL				$5,200.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$5,200.00**

DIVISION - Rough Carpentry-Materials

Description	Quant.	Unit	Unit Cost	Total
Exterior Wall Assembly (2x6 Wood Studs)				
Cart Storage Building				
Foam Sill Seal 50' roll (346 lf)	7	roll	$5.00	$35.00
2x6x20 -Two layers P.T. on top of concrete foundation wall (760lf)	38	pc	$18.80	$714.40
2x6x20 -Two layers top of exterior wall (760lf)	38	pc	$17.20	$653.60
2 x 6 x10 Wall Stud Framing @24" OC	225	pc	$6.90	$1,552.50
1/2" Exterior plywood wall sheathing (4260sf)	133	sh	$21.80	$2,899.40
Tyvek (4261sf div. 900sf/roll)	5	roll	$990.00	$4,950.00
Wash Bay Structure (Gable End Walls)				
2x4x 10 Wall studs	5	pc	$4.70	$23.50
1/2" Exterior plywood wall sheathing (100sf)	3	sh	$21.80	$65.40
Tyvek	100	sf	$1.10	$110.00
Roof Assembly				
Cart Storage Building				
56- Roof Truss at cart storage at 53lf	2968	lf	$10.00	$29,680.00
15- Roof Truss at cart storage at 33lf	495	lf	$10.00	$4,950.00
5/8" Roof sheathing (7470sf)	233	pc	$27.40	$6,384.20
1x3x16' Strapping at ceiling of Ancillary spaces	330	lf	$0.20	$66.00
2 x 4 x 16' Bridging at trusses in cart storage at 24" oc. (2800lf)	175	pc	$7.25	$1,268.75
Wash Bay Structure				
Columns, top and bottom plates and anchor bolts	4	ea	$300.00	$1,200.00
(2) 14" Laminated beams at perimeter frame	164	lf	$7.25	$1,189.00
Misc. bracing	1	ls	$500.00	$500.00
14- Roof Truss at Wash Bay at 18lf	252	lf	$10.00	$2,520.00
5/8" Roof sheathing (600sf)	18	pc	$27.40	$493.20
2 x 4 x 16' Bridging at trusses at 24" oc. (220lf)	14	pc	$7.25	$101.50
Misc. Materials				
Cart Storage Building				
Simpson Fasteners, Hangers, nails, screws, etc.	1	ls	$3,000.00	$3,000.00
Wash Bay Structure				
Simpson Fasteners, Hangers, nails, screws, etc.	1	ls	$500.00	$500.00
Framing Labor				
Cart Storage Building				
Rough Carpentry Labor (6200 +/- Inc. overhangs)	6200	sf	$17.00	$105,400.00
Wash Bay Structure				
Rough Carpentry Labor	400	sf	$17.00	$6,800.00
SUBTOTAL				$175,100.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$175,100.00**

DIVISION - Cabinets and Casework

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Work Counter out side parts storage room			By owner	
Break room base cabinet and counter	1	ls	$400.00	$400.00
Wash Bay Structure				
None			None	
SUBTOTAL				$400.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$400.00**

DIVISION - Finish Carpentry

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Interior Trim (Primed Pine)				
Window Trim , top. bottom and sides (1 x 4)	226	lf	$0.90	$203.40
Window sill	14	ea	$0.90	$12.60
Extension Jambs	18	ea	$60.00	$1,080.00
Door Trim (1 x 4)	40	lf	$0.90	$36.00
Over Head Door trim (1x4)	250	lf	$0.90	$225.00
Install Trim				
Window Trim install -Single	14	ea	$275.00	$3,850.00
Install Door Trim	2	ea	$200.00	$400.00
Install Over Head Door Trim	4	ea	$200.00	$800.00
Wash Bay Structure				
None			None	
SUBTOTAL				$6,600.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$6,600.00**

DIVISION - Thermal and Moisture

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Foundation Insulation 2" rigid perimeter concrete foundation wall	2150	sf	$2.30	$4,945.00
Below Slab insulation- 2" rigid Insulation under the first 4 ft. of the perimeter of the slab on grade	1520	sf	$2.30	$3,496.00
R-19 (6") Unfaced fiberglass batts in exterior walls of Ancillary area only	1000	sf	$2.10	$2,100.00
Expanding Spray Foam				
Windows	18	ea	$20.00	$360.00
Exterior Doors	2	ea	$20.00	$40.00
O.H. Doors	8	ea	$20.00	$160.00
Sealants				
Caulking, Sealants, Fire Safing, etc	5930	sf	$1.00	$5,930.00
Damproofing/Waterproofing-Materials				
Damproofing of exterior perimeter foundations walls	2150	sf	$1.00	$2,150.00
Vapor Barrier-Material				
Vapor barrier material below slab on grade w/10% laps	6560	sf	$0.15	$984.00
Wash Bay Structure				
Insulation , sealants, vapor barrier and Damproofing			None	
SUBTOTAL				$20,200.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$20,200.00**

DIVISION - Exterior Siding and Trim				
Description	Quant.	Unit	Unit Cost	Total
PVC Trim: (Painted)				
Cart Storage Building				
Corner Boards (1 x 10)	100	lf	$4.70	$470.00
Corner Boards (1 x 8) Ancillary area	100	lf	$2.90	$290.00
Rake Boards (1 x 10) Gable	170	lf	$4.70	$799.00
Trim Boards (1 x 4) Gable	170	lf	$1.90	$323.00
Freeze Boards (1 x 10) Gable	170	lf	$4.70	$799.00
Freeze Boards (1 x 10)	260	lf	$4.70	$1,222.00
Water table Boards (1 x 8)	260	lf	$2.90	$754.00
Water table cap (1 x 3)	260	lf	$1.60	$416.00
Fascia Boards (1 x 8)	260	lf	$2.90	$754.00
Soffit Boards (1 x 16)	260	lf	$7.50	$1,950.00
Freeze Board over O.H. Doors (1x10)	100	lf	$4.70	$470.00
Trim Board over O.H. Doors (1x6)	100	lf	$2.90	$290.00
Cap board over O.H. Doors (1x6)	100	lf	$2.90	$290.00
Window Trim (1 x 5)	160	lf	$2.40	$384.00
Window Apron (1 x 4)	50	lf	$1.90	$95.00
Historic Window Trim sill	18	lf	$10.00	$180.00
O.H. Door Trim (1 x 6)	250	lf	$2.80	$700.00
Entry Door Trim (1 x 5)	40	lf	$2.40	$96.00
30 x 36 Vents	2	ea	$350.00	$700.00
Install Exterior Trim	2840	lf	$4.00	$11,360.00
Wash Bay Structure				
Rake Boards (1 x 10) Gable	50	lf	$4.70	$235.00
Trim Boards (1 x 4) Gable	50	lf	$1.90	$95.00
Freeze Boards (1 x 10) Gable	50	lf	$4.70	$235.00
Freeze Boards (1 x 10)	40	lf	$4.70	$188.00
Fascia Boards at eave (1 x 8)	90	lf	$2.90	$261.00
Soffit Boards at eave(1 x 12)	90	lf	$5.70	$513.00
Soffit Boards at bottom of engineered frame (1 x 6)	90	lf	$2.80	$252.00
Underside of roof structure shall be exposed			None	
Columns covers			None	
Shingles-Material				
Cart Storage Building				
Clear -A, White Cedar-16" -5" TTW (4 bundles per square)	42	sq	$225.00	$9,450.00
Install White Cedar	42	sq	$475.00	$19,950.00
Wash Bay Structure				
White Cedar-16" -5" TTW (4 bundles per square) Gable ends	1	sq	$225.00	$225.00
Install White Cedar	1	sq	$475.00	$475.00
SUBTOTAL				$54,200.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$54,200.00**

DIVISION - Windows

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Marvin Integrity -All Ultrix				
Type-A (3' x 3+/-) Awning windows (Not 120MPH Rated)	18	ea	$500.00	$9,000.00
Install Windows	18	ea	$150.00	$2,700.00
Wash Bay Structure				
None			None	
SUBTOTAL				$11,700.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$11,700.00**

DIVISION - Roofing

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Arch. grade Asphalt roof shingles	75	sq	$200.00	$15,000.00
15# Felt paper	7500	sf	$0.10	$750.00
Ice and water shield (1800sf /200sf/ roll)	9	roll	$110.00	$990.00
Ridge Vent	150	lf	$3.50	$525.00
Soffit Venting	250	lf	$2.50	$625.00
Aluminum Gutters	246	lf	$7.00	$1,722.00
Aluminum Downspouts	75	lf	$7.00	$525.00
Install roof shingle system	75	sq	$350.00	$26,250.00
Wash Bay Structure				
Arch. grade Asphalt roof shingles	6	sq	$200.00	$1,200.00
15# Felt paper	600	sf	$0.10	$60.00
Ice and water shield (208sf /200sf/ roll)	0.5	roll	$110.00	$55.00
Ridge Vent			None	
Soffit Venting			None	
Aluminum Gutters	52	lf	$7.00	$364.00
Aluminum Downspouts	20	lf	$7.00	$140.00
Install roof shingle system	6	sq	$350.00	$2,100.00
SUBTOTAL				$50,300.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$50,300.00**

DIVISION - Interior Glass and Glazing

Description	Quant.	Unit	Unit Cost	Total
None				
SUBTOTAL				$0.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$0.00**

DIVISION - Doors Frames and Hardware

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Exterior Doors				
Insulated Fiberglass doors and frames	2	ea	$850.00	$1,700.00
Interior Doors				
Rated steel door and frame at electric closet	1	ea	$650.00	$650.00
Steel door and frame to storage and break room	2	ea	$550.00	$1,100.00
Exterior Door Hardware				
Exterior Lockset and closer at entry doors	2	ea	$250.00	$500.00
Kick Plates on Exterior entry doors	2	ea	$25.00	$50.00
Panic hardware on exterior doors			None	
Interior Door Hardware				
Locksets and closures on interior doors	3	ea	$200.00	$250.00
Kick Plates	3	ea	$25.00	$75.00
Floor or wall stops	3	ea	$5.00	$15.00
Installation of Doors, Frames and Hardware				
Exterior Doors	2	ea	$250.00	$500.00
Interior Doors	3	ea	$250.00	$750.00
Wash Bay Structure				
None			None	
SUBTOTAL				$5,600.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$5,600.00**

DIVISION - Drywall

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Rated Walls at electrical closet shall consist of wood stud, Insulation, (2) layer of 5/8" GWB each side, taped and sanded.	16	lf	$70.00	$1,120.00
1/2"" GWB on wood studs of inside face of exterior wall, taped and sanded.	52	lf	$50.00	$2,600.00
1/2" GWB on both sides wood studs of interior walls taped and sanded.	30	lf	$50.00	$1,500.00
1/2" plywood at the face of the interior wall facing the cart storage area to 4' AFF (1200 sf)	4	pc	$32.80	$131.20
GWB Ceiling at Electrical ,Parts and Break Rooms	240	sf	$6.00	$1,440.00
Wash Bay Structure				
None			None	
SUBTOTAL				$6,800.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$6,800.00**

DIVISION - Flooring

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Sealed Concrete slab on grade	5600	sf	$1.00	$5,600.00
Exposed concrete slab in Electric, Parts storage room and Ancillary spaces	425	sf	$1.00	$425.00
VCT Break Room	175	sf	$5.00	$875.00
Vinyl Base in break room	60	lf	$3.00	$180.00
Furnish and install a 2"x 6" P.T. wood base at interior wall facing the cart storage area	45	lf	$5.00	$225.00
Wash Bay Structure				
None			None	
SUBTOTAL				$7,300.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$7,300.00**

DIVISION - Acoustical Ceiling				
Description	Quant.	Unit	Unit Cost	Total
None				
SUBTOTAL				$0.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$0.00**

DIVISION - Painting				
Description	Quant.	Unit	Unit Cost	Total
Exterior Painting:				
PVC Trim: (Painted)				
Cart Storage Building				
Corner Boards (1 x 10)	100	lf	$0.70	$70.00
Corner Boards (1 x 8) Ancillary area	100	lf	$0.70	$70.00
Rake Boards (1 x 10) Gable	170	lf	$0.70	$119.00
Trim Boards (1 x 4) Gable	170	lf	$0.70	$119.00
Freeze Boards (1 x 10) Gable	170	lf	$0.70	$119.00
Freeze Boards (1 x 10)	260	lf	$0.70	$182.00
Water table Boards (1 x 8)	260	lf	$0.70	$182.00
Water table cap (1 x 3)	260	lf	$0.70	$182.00
Fascia Boards (1 x 8)	260	lf	$0.70	$182.00
Soffit Boards (1 x 16)	260	lf	$0.70	$182.00
Freeze Board over O.H. Doors (1x10)	100	lf	$0.70	$70.00
Trim Board over O.H. Doors (1x6)	100	lf	$0.70	$70.00
Cap board over O.H. Doors (1x6)	100	lf	$0.70	$70.00
Window Trim (1 x 5)	160	lf	$0.70	$112.00
Window Apron (1 x 4)	50	lf	$0.70	$35.00
Historic Window Trim sill	18	lf	$0.70	$12.60
O.H. Door Trim (1 x 6)	250	lf	$0.70	$175.00
Entry Door Trim (1 x 5)	40	lf	$0.70	$28.00
30 x 36 Vents	2	ea	$150.00	$300.00
Wash Bay Structure				
Rake Boards (1 x 10) Gable	50	lf	$0.70	$35.00
Trim Boards (1 x 4) Gable	50	lf	$0.70	$35.00
Freeze Boards (1 x 10) Gable	50	lf	$0.70	$35.00
Freeze Boards (1 x 10)	40	lf	$0.70	$28.00
Fascia Boards at eave (1 x 8)	90	lf	$0.70	$63.00
Soffit Boards at eave(1 x 12)	90	lf	$0.70	$63.00
Soffit Boards at bottom of engineered frame (1 x 6)	90	lf	$0.70	$63.00
Underside of roof structure shall be exposed			None	
Columns covers			None	

Interior Painting:

Cart Storage Building				
First Floor:				
Exposed steel column and beams	1	ls	$2,500.00	$2,500.00
Rail at Attic over high bay area	28	lf	$50.00	$1,400.00
Interior Walls -Electric closet	380	sf	$0.80	$304.00
Inside face of exterior walls at Electric, Parts and Break rooms	520	sf	$0.80	$416.00
Interior walls at Electric, Parts and Break room	600	sf	$0.80	$480.00
GWB Ceilings at electric closet	70	sf	$0.80	$56.00
GWB Ceilings in Parts and Break room	235	sf	$0.80	$188.00
Doors and Windows				
Windows and trim	18	ea	$90.00	$1,620.00
Doors and Frames	3	ea	$90.00	$270.00
Over Head Door trim	8	ea	$120.00	$960.00
Wash Bay Structure				
None			None	
SUBTOTAL				$10,800.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$10,800.00**

DIVISION - Specialties

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Surface Mounted Towel Dispenser in Break Room	1	ea	$35.00	$35.00
Soap dispenser			None	
Mirror			None	
Install accessories	1	ea	$50.00	$50.00
Signage				
Interior and Exterior building signage	1	All	$225.00	$225.00
Fire extinguishers				
5# ABC Fire extinguisher	2	ea	$100.00	$200.00
Fire rated Cabinet			None	
Window Blinds				
Blinds			By owner	
Wash Bay Structure				
Wash water recycling system			By owner	
SUBTOTAL				$500.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$500.00**

DIVISION - Over Head Doors

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
10' x 10' Insulated sectional doors (Manual)	8	ea	$2,200.00	$17,600.00
Wash Bay Structure				
None			None	
SUBTOTAL				$17,600.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$17,600.00**

DIVISION - Fire Protection

Description	Quant.	Unit	Unit Cost	Total
None			None	
SUBTOTAL				$0.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$0.00**

DIVISION - Plumbing

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Plumbing Fixtures			None	
Trench drains system at O.H. Doors			W/Site drainage	
Wash Bay Structure				
Wash Water recycling system Allowance			w/specialties and Equipment	
Freeze proof hose bib and water piping			None	
SUBTOTAL				$0.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$0.00**

DIVISION - HVAC

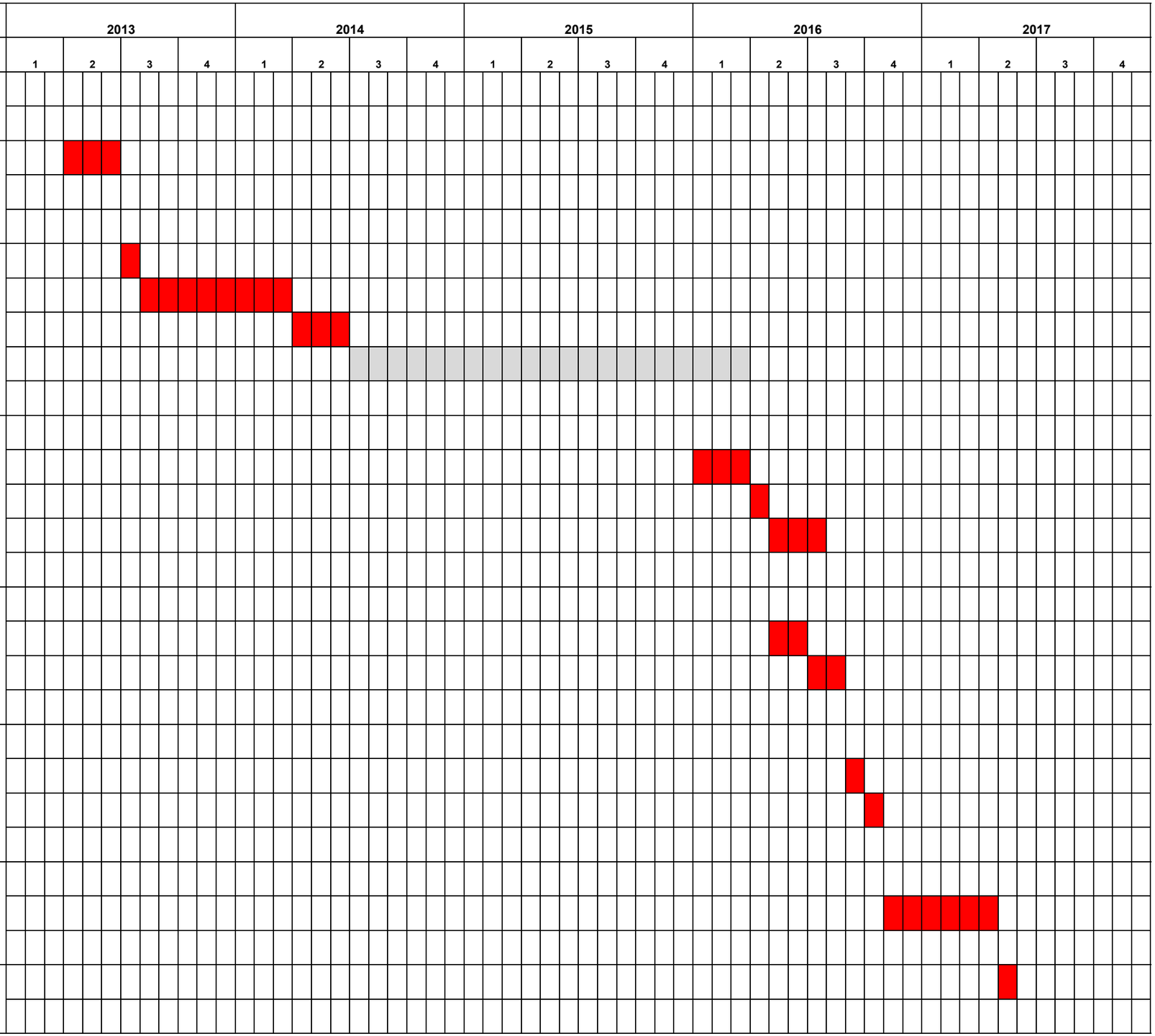
Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building				
Exhaust fan in Break Room			None	
Heat and cooling in cart storage area			None	
Heat and cooling in Ancillary areas			None	
Gas Piping			None	
Wash Bay Structure				
None			None	
SUBTOTAL				$0.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$0.00**

DIVISION - Electrical

Description	Quant.	Unit	Unit Cost	Total
Cart Storage Building and Wash Bay Structure			Included	
New Electrical Service				
Primary electrical service and pad mount transformer			None	
Secondary Electric Service -Extend the service from the existing storage buildings being demolished.			Included	
60 Amp main service, disconnects, etc.			Included	
Meter socket			None	
Sub-panel			Included	
Power Distribution			Included	
Power distributions for lighting, outlets, switches, etc.			Included	
Power to Sanyo Unit in break room			Included	
Power to relocated fuel storage tank			Included	
Power to plumbing equipment			None	
Power to wash water recycle system			None	
Power to cart charging stations			None	
Lighting (Vapor Proof)			Included	
Site lighting			None	
Exterior Building Lighting			Included	
Interior Lighting (Vapor Proof Fixtures)			Included	
Light switching			Included	
Exit and Emergency lighting			Included	
Grounding System			Included	
Building and Neutral			Included	
Tel/Data				
Rings and Strings only			Included	
Addressable Fire Alarm System				
Control panel, digital communicator , CO , smoke and heat detectors etc.			Included	
Voice Evacuation			Not Included	
Audio/Video system			By owner	
Sound/Paging System			By owner	
Television System			By owner	
Telephone System			By owner	
Security System			By owner	
Emergency Generator and Transfer switch			None	
Square foot cost (Cart Storage Building)	6200	sf	$12.00	$74,400.00
Square foot cost (Wash Bay Structure)	400	sf	$10.00	$4,000.00
SUBTOTAL				$78,400.00
SUBCONTRACTOR PRICE				$0.00
TOTAL				**$78,400.00**

Preliminary Project Schedule
Cranberry Valley Golf Cart Storage Building - Harwich, MA
5/19/2014

Town Phase#	Arch Phase#	General Phase / Task
PHASE ONE	I.	**Pre-Contract Phase**
		> Architect Selection
	II.	**Conceptual Design Phase (Phase One)**
		> Pre-Design Programming
		> Concept Design Development
		> Construction Cost Estimate / Public Presentations
		> Delay for Funding Approval until Spring 2016
PHASE TWO	III.	**Schematic Design Phase**
		> Continue To Refine & Update Design Prepare for Public Presentations / Through Town Meeting
		> Town Meeting / Additional funding to proceed w/Con. Bid Documents & Construction (Spring 2016)
		> Local Board Approvals / Concurrent with DD/CD Phase
	IV.	**Design Development/Construction Documents Phase**
		> 50% Completion of Des. Development/Con. Docs.
		> 100% Completion of Des. Development/Con. Docs.
	V.	**Contractor Bidding Phase**
		> Sub & General Bid Receipts
		> Construction Contract Award
PHASE THREE	VI.	**Construction Administration Phase**
		> (Assumed 6 month construction period)
	VII.	**Project Close-Out Phase**
		> Completion by April/May 2017



The Code Review was based on The International Building Code 2009 and State of MA Amendments, State of MA General Laws, 521 CMR State of MA Accessibility Code, and ADA.

Building Code Summary:		
Massachusetts Building Code – 780 CMR **Massachusetts Amendments to the International Building Code 2009 Basic/Commercial Eighth Edition** **Project:** Cranberry Valley Golf Club ï Cart Barn Building **Location:** 183 Oak Street, Harwich, MA **General Building Information:** 1 story		
***Note:* Code review based on electronic drawings files dated 12/5/2013.**		
Use and Occupancy:		
Construction Type	5B ï Combustible Unprotected	Table 601
Use Group	**S-2 – Low Hazard Storage**	Section 311.3

General Building Limitations (Chapter 5):	
Low Hazard Storage - S-2, Construction Type 5B: Area Limitation: **13,500 square feet**	Table 503
Height Limitation: **2 stories, 40'**	Table 503

Actual Building Area Calcs.	**Gross Building Area (inside face exterior walls)**	**Aggregate Building Area (outside face exterior walls)**
First Floor	5,758 gsf	5,930 sf
Total	**5,758 sf**	***5,930 sf**

***Does not exceed 7,500 gross sf area – an automatic sprinkler system is not required per M.G.L. c. 148 § 26G.**

Actual Building Height	Proposed Building	**22'-6"**

CONSTRUCTION CLASSIFICATION:

602.1 General: Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in sections 602.2 through 602.5. The building elements shall have a fire-resistance rating not less than that specified in Table 601 and exterior walls shall have a fire resistance rating not less than that specified in Table 602. Where required to have a fire resistance rating by Table 601, building elements shall

comply with the applicable provisions of Section 703.2. The protection of openings, ducts, and air transfer openings in building elements shall not be required unless required by other provisions of this code.

> **602.1.1 Minimum requirements.** A building or portion thereof shall not be required to conform to the details of a type of construction higher than that type which meets the minimum requirement based on occupancy even though certain features of such building actually conform to a higher type of construction.

Type 5B Construction (Combustible/Unprotected):
602.5: Type V construction is that type of construction in which the structural elements, exterior walls and interior walls are of any materials permitted by this code.

Table 601: Fire Resistance Rating Requirements for Building Elements (hours) for Type 5B Construction:

Building Element	**Rating (Hours)**
Primary Structural Frame ï See Section 202) (note g: Not less than the fire resistance rating as referenced in Section 704.10)	0 Hour
Bearing Walls Exterior (note f: Not less than the fire resistance rating based on fire separation distance - see table 602). (note g: Not less than the fire resistance rating as referenced in Section 704.10) Interior	 0 Hour 0 Hour
Nonbearing walls and partitions - Exterior	See Table 602
Nonbearing walls and partitions ï Interior (note e: Not less than the fire-resistance rating required by other sections of this code)	0 Hour
Floor construction and secondary members ï See Section 202	0 Hour
Roof Construction and secondary members ï	0 Hour

See Section 202	

704.10 Exterior Structural Members. Load bearing structural members located within the exterior walls or on the outside of a building or structure shall be provided with the highest fire-resistance rating as determined in accordance with the following:

1. As required by Table 601 for the type of building element based on the type of construction of the building;
2. As required by Table 601 for exterior bearing walls based on the type of construction; and
3. As required by Table 602 for exterior walls based on the fire separation distance.

Massachusetts State Law – Automatic Sprinkler Requirement

M.G.L. c. 148 § 26G

Section 26G. Every building or structure, including any additions or major alterations thereto, which totals, in the aggregate, more than 7,500 gross square feet in floor area shall be protected throughout with an adequate system of automatic sprinklers in accordance with the provisions of the state building code. No such sprinkler system shall be required unless sufficient water and water pressure exists. For purposes of this section, the gross square footage of a building or structure shall include the sum total of the combined floor areas for all floor levels, basements, sub-basements and additions, in the aggregate, measured from the outside walls, irrespective of the existence of interior fire resistive walls, floors and ceilings. This section shall not apply to buildings used for agricultural purposes as defined in section 1A of chapter 128.

In such buildings or structures, or in certain areas of such buildings or structures, where the discharge of water would be an actual danger in the event of fire, the head of the fire department shall permit the installation of such other fire suppressant systems as are prescribed by the state building code in lieu of automatic sprinklers. Automatic suppressant or sprinkler systems shall not be required in rooms or areas of a telephone central office equipment building when such rooms or areas are protected with an automatic fire alarm system. Sprinkler systems shall not be required in open-air parking structures, defined as: buildings, structures, or portions thereof, used for parking motor vehicles and having not less than twenty-five per cent of the total wall area open to atmosphere at each level, utilizing at least two sides of the structure. This section shall not apply to buildings or additions used for residential purposes.

The head of the fire department shall enforce the provisions of this section.

[Fourth paragraph applicable as provided by 2008, 508, Sec. 6.]

Whoever is aggrieved by the head of the fire department's interpretation, order, requirement, direction or failure to act under the provisions of this section, may, within forty-five days after the service of notice thereof, appeal from such interpretation, order, requirement, direction or failure to act to the automatic sprinkler appeals board as provided in section two hundred and one of chapter six. The board may grant a reasonable waiver from the provisions of this section, or may allow the installation of a reasonable alternative or modified system of automatic sprinklers upon reviewing the characteristics of buildings that have architectural or historical significance.

State of Massachusetts Uniform Plumbing Code

No restrooms have been included in the design of this structure since it is classified as Storage and is an accessory building to the main Clubhouse.