



# **RECREATION PLAN**

**Niagara Power Project**

**FERC No. 2216**

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**1.0 EXECUTIVE SUMMARY**

In accordance with Article 404 of the Niagara Power Project license, issued on March 15, 2007, the New York Power Authority (Power Authority) has prepared this Recreation Plan (Recreation Plan or Plan). The Niagara Power Project is located on the American side of the Niagara River, downstream of Niagara Falls, in the town of Lewiston, New York. The project is located in the well known Niagara Region of New York State, which is home to Niagara Falls.

There are currently nine recreation facilities open to the public within the Niagara Power Project boundary. These facilities support a variety of recreation opportunities including hiking, biking, wildlife viewing, fishing, and sightseeing. The facilities are maintained by a number of entities including the Power Authority, municipalities, the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), and the New York State Department of Transportation (NYSDOT). Further information regarding the existing recreation facilities can be found in [Section 3.0](#) of this plan.

The Power Authority conducted several recreation-oriented studies during the relicensing of the Niagara Power Project. These studies determined that an estimated 254,300 recreation days were spent on visits to project recreation facilities. A recreation day is each visit by a person to a development for recreational purposes during any portion of a 24-hour period. The majority of this use occurred between the months of June and September. During the studies, the Niagara Gorge Discovery Center and the Great Gorge Railroad right-of-way (both project recreation facilities) were closed for renovations; therefore the estimated recreation days do not include use for these facilities. The studies also looked at the activities that individuals visiting the project area participated in. Individual activities included angling, walking, biking, running, picnicking, bird watching, sightseeing, and parking. Angling was the most popular recreation activity. Studies also determined that overall parking utilization at project facilities was not observed to occur over available capacity. Information regarding the current use of project recreation facilities can be found in [Section 4.1](#) of this Plan.

[Section 4.2](#) of this Plan discusses future recreation use. During project relicensing, it was determined that the population of Niagara County is projected to decrease by the year 2020. Though population is expected to decrease, it is not unreasonable to expect that visitation will increase for facilities associated with or in direct proximity to Niagara Falls. This is because Niagara Falls is a national and international recreation destination. The Recreation Needs Assessment (KA 2005b) found that recreation facilities within the project boundary may be in need of upgrading, modernization and revitalization in the near future to accommodate future recreation demand.

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To address recreation needs within the project boundary, recreation enhancement projects are proposed at five project recreation facilities (Robert Moses Fishing Pier, Upper Niagara River Observation Area, Reservoir State Park, Niagara Gorge Discovery Center, and the Great Gorge Railroad Trail). There is also a new facility (Upper Mountain Parking Lot/Fishing Access) proposed on the north side of the Lewiston Reservoir and a new Haudenosaunee exhibit planned for the Niagara Power Project Visitor Center. Further information regarding proposed recreation facilities can be found in [Section 5.0](#) of this Plan.

[Section 6.0](#) of this Plan contains the implementation schedules and cost estimates for the proposed recreation facilities. It is estimated that a total of \$10,680,000.00 (2007 NPV) will be spent to complete the recreation enhancements proposed in [Section 5.0](#). Though the Power Authority is responsible for all project recreation facilities, some facilities are operated and maintained by other entities. [Section 7.0](#) of this Plan discusses the entities responsible for the operation and maintenance of project recreation facilities.

A methodology to determine future recreational needs at the Niagara Power Project can be found in [section 8.0](#) of this Plan. The Recreation Plan has been designed to provide for the changing needs of the recreating public. This will be accomplished through periodic evaluations of recreational use of project recreation facilities. The evaluations will coincide with every other FERC Form 80 Licensed Hydropower Development Recreation Report submittal year (every 12 years). Once the evaluation is complete, a report will be developed. The report will be distributed to consultation parties for a 30-day review. Once the comments are addressed the report will be submitted to FERC.

[Section 9.0](#) of this Plan includes a discussion of the measures the Power Authority and the Tuscarora Nation have agreed to in order to prevent trespass on Tuscarora Nation lands by users of the project's recreational facilities.

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**2.0 INTRODUCTION**

The Niagara Power Project is located on the American side of the Niagara River in Niagara County, New York. The project features include: two intake structures, two underground conduits and associated pump stations, a forebay, the Lewiston Reservoir, the Lewiston Pump Generating Plant, the Robert Moses Niagara Power Plant, and the Niagara Switchyard.

The Niagara Region is well known for Niagara Falls, however, it is also host to numerous state and local parks and attractions. Niagara Falls State Park is a non-project park located outside of the project boundary at the nearby Niagara Falls. There are other non-project state parks that are also near the Niagara Power Project, but are not located within the project boundary. These non-project parks include: Earl W. Brydges Artpark, Beaver Island State Park, Buckhorn State Park, Joseph Davis State Park, Devil's Hole State Park, Whirlpool State Park, and Fort Niagara State Park. These non-project parks offer a variety of recreation opportunities including, but not limited to: picnicking, hiking, walking, swimming, tennis, sightseeing, wildlife viewing, and cross country skiing.

The area surrounding the project includes the lands of seven municipalities: the City of Niagara Falls, the Town of Grand Island, the Town of Lewiston, the Town of Niagara, the Town of Porter, the Village of Lewiston, and the Village of Youngstown. According to the Final Environmental Impact Statement (FERC 2006), the area surrounding the project had a population of 111,107 in 2000 which was a decline from a population of 140,499 in 1960.

In accordance with Article 404 of the Niagara Power Project (FERC No. 2216) license issued March 15, 2007, the Power Authority has developed this Recreation Plan. The following sections of the plan describe the locations and amenities of existing facilities, current use of project facilities, recreation facility needs, proposed recreation enhancements, and a proposed methodology for continuing consultation and evaluation of recreation needs.

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**3.0 EXISTING RECREATION FACILITIES**

There are nine public recreation facilities associated with the Project. These facilities offer a variety of recreation opportunities including hiking, biking, wildlife viewing, fishing, and sightseeing. Of the nine project recreation facilities, two are owned and operated by the Power Authority, one is operated and maintained by both the Power Authority and the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), one is operated and maintained by both the Power Authority and the City of Niagara Falls, one is operated and maintained by the Power Authority and the New York State Department of Transportation (NYSDOT), and the rest are maintained by various state agencies. The nine recreation facilities located within the project boundary are listed below with a brief description of the current recreation opportunities. [Figure 3-1](#) shows the locations of the recreation facilities within the project boundary.

**Upper River Trail:**

Portions of the Upper River Trail pass through the project boundary near the project intake structures. This paved walking/biking trail was constructed in the late 1990's and is open to the public. The trail begins at the north Grand Island Bridge and passes through the Upper Niagara River Observation Area on the way to the Niagara Reservation State Park. The trail is currently maintained by the City of Niagara Falls and is in excellent condition. The Power Authority maintains that portion of the trail that passes through the Upper Niagara River Observation Area.

**Upper Niagara River Observation Area:**

This facility is located at the site of the project water intakes and consists of a parking area, walking/bike trail (Upper River Trail), and a concrete bulkhead for fishing. The parking area contains 40 parking spaces and is currently maintained by the Power Authority and NYSDOT. A condition assessment done at the site in 2000 determined that the overall site was in fair condition.

**Niagara Gorge Discovery Center:**

The Niagara Gorge Discovery Center is operated by the NYSOPRHP. The recently renovated facility offers exhibits on the geological and natural history of Niagara Falls and the Niagara Gorge. The remains of the Schoellkopf Power Generating Plant can be seen along the gorge wall. There are also picnic tables and shelters available at the site. The entire site is open to the public. There is a fee to enter the Niagara Gorge Discovery Center. This facility was closed for renovations during the 2000

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condition assessment. Renovations of the facility included the addition of a 26-foot high artificial rock climbing wall and updates to some of the exhibits.

**Great Gorge Railroad Trail:**

The trail is located on the remains of the Great Gorge Railroad right-of-way and is open to the public. Parking is available at the Niagara Gorge Discovery Center; from there, the trail travels approximately 2-miles north into the Niagara Gorge and ends at a rock slide just north of the Whirlpool Bridge. The trail descends gradually into the gorge and offers views of Niagara Falls and the Niagara River. The trail was closed during the 2000 condition assessment. Improvements to the trail were completed in 2003. These improvements have been observed during subsequent trips to the trail and include a new trailhead at the Niagara Gorge Discovery Center and improved trail conditions. The NYSOPRHP currently maintains the trail.

**Robert Moses Parkway:**

Portions of the Robert Moses Parkway lie within the project boundary. The Robert Moses Parkway is a two to four lane limited-access highway that begins at the North Grand Island Bridges and ends at Fort Niagara (a total distance of approximately 17 miles). There is a section of the Parkway that is interrupted as it passes through the City of Niagara Falls in the vicinity of the Niagara Reservation State Park. The approximately 5.9-mile section of the parkway that is located within the project boundary is maintained by the NYSDOT. In September 2001, two of the four lanes of the parkway that lie between the Robert Moses Niagara Power Plant (RMNPP) and the Niagara Gorge Discovery Center were closed to vehicular traffic. This section has been opened to the public for walking, biking, rollerblading, and other activities. This closure has been called the Robert Moses Pilot Program and is maintained by the NYSOPRHP.

**Robert Moses Fishing Pier:**

The Robert Moses Fishing Pier was constructed by the Power Authority in the 1988 to provide public access to the project's tailwaters. The fishing cleaning facility, restroom and elevator were completed in 1990. The Power Authority owns and maintains the fishing pier, fish-cleaning facility, restrooms, and handicap-accessible elevator at the south end of the RMNPP. In addition to the fishing pier, nearby stairs lead down to the Niagara River shoreline upstream of the plant; this serves as an additional fishing access. A roadway oval and four Americans with Disabilities Act (ADA) signed parking spaces are available just outside of the plant fence. A 20-car parking lot for all other anglers is located at the top of the lower Plant Access Road hill. There is a walking trail with a rest station that

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allows individuals to safely travel from the parking area to the fishing pier. The 2000 condition assessment rated the facility in overall good condition. The ADA compliance and buildings at the site were rated in fair condition.

**Niagara Power Project Visitor Center:**

The visitor center, also known as the Power Vista, is located at the RMNPP. The facility is owned and operated by the Power Authority. The visitor center is open to the public, free of charge, year round. The visitor center offers many educational and hands-on exhibits that were recently updated. Exhibits include a Victorian house with energy saving hints, a photo-ops station, and exhibits on solar power, fuel cells and electric vehicles. The observation deck offers scenic views of the Niagara River and the Niagara Power Project. A project sign, as required by Part 8 of FERC's regulations, is located near the front door of this facility. The 2000 condition assessment rated the facility in overall excellent condition due to recent renovations.

**Lewiston Reservoir Fishing Access:**

The Lewiston Reservoir Fishing Access is a foot trail that provides public access to the Lewiston Reservoir. A parking lot and paved trail are located on the southwest side of the reservoir. The parking lot holds approximately 35 vehicles and is available for Reservoir State Park users as well. There are approximately 6-miles of gravel road that almost completely circles the reservoir atop the dike. The Power Authority maintains the roadway that can be used by hikers, joggers, bikers and anglers, as well as for operational needs of the Power Authority. The parking lot used for the Access is maintained by NYSOPRHP. The 2000 condition assessment rated the overall facility as fair. This was due in part to the condition of the existing pavement of the roads and parking area.

**Reservoir State Park:**

The 133-acre Reservoir State Park is a NYSOPRHP-operated facility that is located at the base of the Lewiston Reservoir. The park offers a variety of recreational opportunities that include softball, basketball, soccer, walking, sledding, golf ball driving, picnicking, model airplane flying, and tennis. The park has one permanent restroom facility and a playground area. There are approximately 200-parking spaces available at the facility. The 2000 condition assessment rated the overall facility in poor condition. In general, the site needed maintenance and repair.



**Legend**

- Road
- Recreation Facility
- City/Town
- FERC Project Boundary
- Water

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**Figure 3-1  
Current Recreation Facilities**

0 0.25 0.5 1 Miles 1 inch equals 0.5 miles



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#### **4.0 CURRENT AND FUTURE USE**

Several recreation-oriented studies were conducted during the relicensing of the Niagara Power Project to look at the amount of use that project facilities received. The studies also assessed recreational needs within the project area. These studies included the report on “Recreation Facility Use and Capacity Investigation” (KA 2005a) and the “Recreation Needs Assessment” (KA 2005b).

#### **4.1 Current Use**

During the studies described above, it was estimated that visits to project recreation facilities accounted for 254,300 recreation days. A recreation day is defined as each visit by a person to a development for recreational purposes during any portion of a 24-hour period. The majority of this use occurred between June and September. The most heavily used project facility was Reservoir State Park with 97,900 recreation days, followed by the Niagara Project Visitor Center with 85,200 recreation days. The Upper Niagara River Observation Area received the least amount of use with 3,400 recreation days. During the study, both the Niagara Gorge Discovery Center and the Great Gorge Railroad right-of-way were closed for renovations. [Table 1](#) shows the total number of recreation days for project facilities.

Upon request, the NYSOPRHP provided use numbers for a portion of 2007 for both the Niagara Gorge Discovery Center and the Great Gorge Railroad right-of-way (Personal Communication with Barry Virgilio, August 12, 2007). Total use from April 2007 to July 2007 at the Niagara Gorge Discovery Center was 44,482 users. The Great Gorge Railroad ROW Trail had 12,080 users for the same period. The trail count includes individuals participating in guided tours and from public contact made at the trail head. Trail users are not required to stop at the trail head when using the trail; therefore, NYSOPRHP considers this number to be low.

For the purpose of the study, the use figures developed for the Robert Moses Parkway Pilot Program were included with the use figures for Devil’s Hole State Park and Whirlpool State Park. This was done because these parks served as the staging areas for those individuals using the parkway. According to the Robert Moses Parkway Pilot Project Evaluation Report (NYSOPRHP and NYSDOT 2003), the NYSOPRHP separately conducted a trail survey on the newly closed section of the Robert Moses Parkway from May 2002 through November 2002. During the survey, 3,980 individuals were observed using the Robert Moses Parkway. This number includes individuals participating in the National Trails Day and the Gorgefest events.

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Individuals visiting project facilities participate in a variety of activities. These activities include angling, walking, biking, running, picnicking, bird watching, sightseeing, and parking. Angling was the most popular recreation activity with 47% of the visitors participating in this activity. Walking is also popular, with 21% of the visitors participating in this activity. [Table 2](#) shows those activities that individuals chose to participate in, broken down by project recreation facility.

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**TABLE 1\*: USE ESTIMATES FOR THE NIAGARA PROJECT (APRIL 2002-MARCH 2003)**

Site	Weekend	Weekday	Peak Weekend	Total
Upper River Trail	4,000	1,400	600	6,000
Upper Niagara River Observation Area	2,700	500	200	3,400
Niagara Gorge Discovery Center	N/A	N/A	N/A	Closed
Great Gorge Railroad ROW Trail	N/A	N/A	N/A	Closed
Robert Moses Fishing Pier	12,000	9,400	1,200	22,600
Niagara Project Visitor Center	N/A	N/A	N/A	85,200
Lewiston Reservoir	9,900	1,900	400	12,200
Reservoir State Park	N/A	N/A	N/A	97,900
Total				254,300

\* Source KA2005a

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**TABLE 2\*: OBSERVED SHORELINE ACTIVITIES DURING ON-SITE MONITORING \*\***

Site	Swimming	Angling	Running	Walking	Biking	Picnicking	Bird Watching	Sightseeing	Parking	“Other”	Total No. of People Observed
Upper River Trail	0	9	1	0	4	3	3	3	11	1	35
	0%	26%	3%	0%	11%	9%	9%	9%	31%	3%	
Upper Niagara River Observation Area	0	0	12	3	2	8	0	27	3	11	66
	0%	0%	18%	5%	3%	12%	0%	41%	5%	17%	
Robert Moses Parkway	0	0	0	1	11	0	0	0	1	0	13
	0%	0%	0%	8%	85%	0%	0%	0%	8%	0%	
Robert Moses Fishing Pier	0	1268	0	10	0	0	0	45	0	34	1357
	0%	93%	0%	1%	0%	0%	0%	3%	0%	3%	
Lewiston Reservoir Fishing Access	2	583	65	265	25	9	0	117	28	148	1242
	.2%	47%	5%	21%	5%	1%	0%	9%	2%	12%	
<b>Total</b>	<b>2</b>	<b>1860</b>	<b>78</b>	<b>279</b>	<b>42</b>	<b>20</b>	<b>3</b>	<b>192</b>	<b>43</b>	<b>194</b>	<b>2713</b>

\*(KA 2005a)

\*\* The numbers in the table represent observed individuals participating in shoreline recreation activities during onsite monitoring. The primary shoreline recreation activity was recorded for each individual. Percentages may not sum to 100 due to rounding

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Facility utilization was determined by the percentage of parking spaces utilized during surveys. Parking spaces were used because parking capacity is designed to accommodate use of the site and is relatively easy to measure. Capacity use estimates for non-survey sites were developed based on input provided by the operators of those sites. [Table 3](#) shows the amount of parking available at each project recreation site and the percent that available spaces are being utilized. Overall parking utilization at project facilities was not observed over available capacity. The Upper River Trail was the most heavily used with 52% of the capacity utilized on a peak weekend.

<b>TABLE 3: AVERAGE PERCENT CAPACITY USE OF EXISTING PARKING</b>				
<b>Site</b>	<b>No. Parking Spaces</b>	<b>Weekday %</b>	<b>Weekend %</b>	<b>Peak Weekend %</b>
Upper River Trail	10	12	10	52
Upper Niagara River Observation Area	40	2	1	4
Robert Moses Fishing Pier	20	14	19	25
Lewiston Reservoir	35	15	8	9

#### **4.2 Future Use**

The population of Niagara County is projected to decrease by the year 2020. According to the Recreation Needs Assessment (KA 2005b), this would suggest that recreational use within the project area may remain relatively constant, or potentially decline between 2003 and 2019. However, it is not unreasonable to expect that visitation will increase at a rate greater than the population projections for the surrounding communities, at least for facilities associated with, or in direct proximity to Niagara Falls. This is because Niagara Falls is a national and international recreation destination that draws visitors from outside of the region. Demand for a particular recreation activity and participation rates in that activity may change even if population remains constant. This is because individuals may increase their participation in a given activity, or additional people may take an interest in that activity.

The development of the Recreation Needs Assessment included a review of the New York Statewide Comprehensive Outdoor Recreation Plan (NYSCORP 2003). The NYSCORP presented estimated changes in participation rates by recreation activity for the State of New York. Popular activities within the project area are all expected to experience some growth. Projected participation growth rates for activities within the project area include angling/fishing (5.70 percent), walking (5.66 percent), and biking (3.23 percent). [Table 4](#) shows the participation rates for the State of New York for other activities that apply to the project area.

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**TABLE 4\*: ACTIVITY PARTICIPATION GROWTH RATES – NYSCORP**

<b>Activity</b>	<b>Estimated Number of Participants in 1998 Statewide</b>	<b>Percentage of 1998 Population (%)</b>	<b>Estimated Number of Participants in 2020</b>	<b>Percentage of 2020 Population (%)</b>	<b>Growth in Participants (1998-2020)</b>	<b>Percentage Growth (1998-2020)</b>
Relaxing in Park	10,901,801	73.53	11,475,496	77.40	573,695	5.26
Biking	5,242,681	35.36	5,411,849	36.5	169,168	3.23
Golfing	2,378,038	16.04	2,524,301	17.02	146,263	6.15
Walking	9,173,807	61.87	9,692,892	65.37	519,086	5.66
Tennis	2,444,658	16.49	2,543,334	17.15	98,676	4.04
Basketball	2,742,192	18.49	2,757,299	18.6	15,107	0.55
Field Sports	3,086,063	20.81	3,141,449	21.19	55,386	1.79
Hiking	3,150,310	21.25	3,303,820	22.28	153,510	4.87
Fishing/Angling	3,462,233	23.35	3,659,717	24.68	197,485	5.70

\* Source NYSCORP 2003

The NYSCORP also assigned counties an “index of need” for each of the recreation activities that the county supports. The “index of need” is a rating developed through the comparison of estimated future demand for each activity and present recreation facility supply for each county. A rating of “1” indicates a large availability of recreation resources relative to demand and “10” indicates that sites supporting an activity are heavily used. Sixty-eight percent of Niagara County facilities were rated as 5 or 6. The NYSCORP identified parking facilities, historic sites, outdoor tennis courts and field sports facilities (such as soccer fields) as potentially needing replacement in the future.

The Recreation Needs Assessment (KA 2005b) found that the NYSCORP suggests that recreation facilities within the project boundary may be in need of upgrading, modernization and revitalization in the near future to accommodate future recreation demand.

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## **5.0 RECREATION ENHANCEMENTS**

There are recreation enhancement projects planned at five recreation facilities within the Niagara Power Project boundary. These facilities include the Robert Moses Fishing Pier, the Upper Niagara River Observation Area, Reservoir State Park, the Niagara Gorge Discovery Center, and the Great Gorge Railroad Trail. There is also a new facility planned on the north side of the Lewiston Reservoir (Upper Mountain Parking Lot/Fishing Access) and a new Haudenosaunee exhibit planned for the Niagara Project Visitor Center (Power Vista). [Figure 5-1](#) shows the locations of those facilities to be improved or constructed in comparison to existing facilities within the project boundary. Funding for the recreation enhancement projects will be provided by the Power Authority. Those recreation enhancement projects listed in [Section 5.1](#) will be constructed by the Power Authority. Those recreation enhancement projects listed in [Section 5.2](#) will be constructed by NYSOPRHP and funded in part through the Park and Recreation fund that the Authority established as part of the Settlement Agreement. [Section 6.0](#) of this report contains the implementation schedules and cost estimates for the projects and [Section 7.0](#) discusses operation and maintenance of each facility.

### **5.1 Power Authority Recreation Facility Projects**

The following projects will be funded by the Power Authority.

#### **Robert Moses Fishing Pier (enhancement):**

The current parking lot configuration for the Robert Moses Fishing Pier offers four ADA parking spaces in a lower lot adjacent to the main gate of the Robert Moses Niagara Power Plant, and 20 parking spaces in an upper lot. Article 404 of the new license, which incorporates certain recreational enhancements set forth in Condition 9(D) of the Water Quality Certification for the project, requires that the Power Authority construct up to six additional angler parking spaces in the parking lot adjacent to the main gate. Actual planned improvements to the site include adjusting the four existing ADA parking spaces to meet current parking space dimension code requirements and adding ten angler parking spaces. The Power Authority also plans to provide a new Part 8 sign at the site. Several signs, guardrails and a light post will be moved in order to reconfigure the parking lot. [Figure 5.1-1](#) shows the proposed improvements and [Figure 5.1-2](#) shows proposed erosion and sediment control measures to be used.

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**Upper Niagara River Observation Area (enhancement):**

The facility is located at the site of the project water intakes. A condition assessment done at the site in 2000 determined that the site was in overall fair condition. Article 404 of the new license, which incorporates certain recreational enhancements set forth in Condition 9(D) of the Water Quality Certification for the project requires that the Power Authority complete the following measures:

- Resurface the asphalt in the parking lot and along the walkway;
- In compliance with the ADA, designate parking spaces and install curb cuts to allow access to walkways;
- Install a removable 7-foot chain-link fence parallel to the bulkhead approximately twenty-five feet from the Niagara River's edge. The fence will be installed when icebreakers are dry-docked for repairs; at all other times, the fence will be removed and stored to provide unimpeded access to the Niagara River along the intake structure bulkhead railing.

Actual planned improvements are as follows:

- Remove a section of existing fence that currently blocks access to the bulkhead;
- Install a removable 7-foot chain link fence parallel to the retaining wall, twenty-five feet from the Niagara River's edge;
- Remove portions of existing curbing throughout the site and replace;
- Resurface the parking area and the walkways;
- Repair the cobblestone areas;
- Replace existing ADA curb cut;
- Designate 2 ADA parking spaces;
- Install a Part 8 sign; and
- Re-grade areas of poor drainage.

[Figures 5.1-3](#), and [Figure 5.1-4](#) show the planned improvements for the site and the erosion control measures. A new Part 8 sign will also be erected in the vicinity of the parking lot as part of the improvements to this facility. Additional signage, both existing and future, is shown on [Figures 5.1-3](#) and [Figure 5.1-4](#). [Figure 5.1-5](#) shows the erosion control measures to be used.

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**Upper Mountain Parking Lot/Fishing Access (Installation):**

This will be a new facility that will provide access to the northern shore of the Lewiston Reservoir. Article 404 of the new license, which incorporates certain recreational enhancements set forth in Condition 9(D) of the Water Quality Certification, requires that the Power Authority complete the following measures at this site:

- Construct a 16 vehicle parking area;
- Construct a gravel trail across the Niagara Mohawk Power Company transmission line right-of-way for pedestrian use;
- Construct a gravel path to traverse the Reservoir dike in an area located on the northwest side of Lewiston Reservoir near Upper Mountain Fire Station; and
- Implement measures to discourage vehicle access and use of the trail including signs and large boulders.

Actual planned improvements are as follows:

- Construct a 15 vehicle parking area that includes 2 ADA parking spaces;
- Construct a 5-foot wide gravel trail across the National Grid transmission line right-of-way;
- Construct a 4-foot wide staircase with 3 landings to traverse the Reservoir dike; and
- Install large boulders at the entrance of the gravel trail to discourage motor vehicle use.

[Figure 5.1-6](#) shows the new recreation facility that will be created. [Figure 5.1-7](#) shows the erosion control measures to be used at the site. A Part 8 sign will also be located in the vicinity of the parking lot once construction of the facility is complete. After consultation with Power Authority engineers, it was decided that a staircase would provide adequate access to the reservoir while causing less impacts to the Reservoir Dike than the installation of a gravel path. This decision was based on several factors including the large amount of fill that would be needed to construct the trail, the unrealistic length of the trail needed for ADA access (minimum of 700+ feet long), and concerns about altering the integrity of the reservoir dike if large amounts of fill were placed on the north side. The staircase will also provide a more direct path to the top of the reservoir. The staircase will be closed during winter months for safety purposes. During design of the project, two ADA parking spaces were

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added to the parking lot. Due to the size of the area where the parking lot will be installed, the number of parking spaces was decreased from 16 to 15 in order to provide ADA parking.

**Haudenosaunee Exhibit (Installation):**

A new exhibit will be developed and displayed at the Power Authority Visitor Center. The exhibit will focus on the Haudenosaunee people and their associations with the Niagara Power Project. The exhibit is currently being developed in accordance with the license Article 404. The Power Authority and the Tuscarora Nation are currently discussing the development of the exhibit. On December 13, 2007 a site visit to the Power Authority Visitor Center was completed. During this visit currently available exhibit spaces were reviewed. In April of 2008 the Power Authority supplied contact information for a design company to assist the Tuscarora with development of their exhibit. On May 23, 2008, a second walk through occurred at the Power Authority Visitor Center. The Power Authority will continue to consult with the Tuscarora Nation and other parties to develop and implement the new exhibit.

**5.2 Parks and Recreation Fund Projects**

In Part 2, Section 5 of the Relicensing Settlement Agreement Addressing New License Terms and Conditions, dated July 18, 2005, the Power Authority agreed to establish a Parks and Recreation Fund (Fund). This Fund was developed to provide money for capital improvements to be undertaken by NYSOPRHP on lands located within, or in the vicinity of, the project boundary. This section describes those recreation enhancement projects that will be constructed by NYSOPRHP and funded in part through the Park and Recreation fund.

**Reservoir State Park (Enhancement):**

This State Park is located within the project boundary and multiple enhancement projects are planned for it. [Sheet 1](#), [Sheet 2](#), [Sheet 3](#), [Sheet 4](#), and [Sheet 5](#) show the planned improvements and erosion control measures for this facility. Planned improvements for Reservoir State Park include but are not limited to:

- Rehabilitate existing basketball and ball-hockey courts;
- Construct new outdoor pavilions;
- Construct a parking area with approximately 45 spaces for the soccer fields;
- Install a natural ice rink;

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- Improve the current soccer field area;
- Install a winter pavilion with toilet facilities at the sledding hill;
- Repave the existing path to the top of the Lewiston Reservoir;
- Add two new basketball courts;
- Resurface the existing tennis court and replace fence;
- Rehabilitate the softball diamonds (some will be reoriented);
- Expand parking near the softball diamonds;
- Construct an ADA accessible walking path around the perimeter of the southern portion of the park;
- Add trees and shrubs throughout the park;
- Install new entry signs;
- Restore green space near the main parking lot;
- Rehabilitate the current maintenance building; and
- Improve the children's play area.

**Great Gorge Railroad Trail (Enhancement):**

The improvements listed below were designed to complement the recent upgrades to the trailhead that have been completed by NYSOPRHP. The trail travels in and out of the project boundary, therefore some of the following improvements may be located outside of the project boundary. [Sheet L101](#), [Sheet L102](#), [Sheet L103](#), and [Sheet L104](#) show the location of the trail system, improvements to the Schoellkopf trail, the proposed Whirlpool Bridge Trail, and details for the Whirlpool Rapids/Bridges access stair.

- Gorge scaling;
- Construction of an overlook at the Whirlpool Bridge and Rapids;
- Construction of a new trailhead at the Whirlpool Bridge parking lot including a staircase that will connect the trail with the Rim Trail; and
- Construction of a safe access way to the Schoellkopf Ruins.

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**Niagara Gorge Discovery Center (Enhancement):**

Upgrades to this NYSOPRHP facility began in 2002. The following improvements have been designed to continue enhancements to the Center and complement the previous upgrades:

- Reduce and reconfigure the current roadway pavement;
- Replace the current chain-link fence with an attractive new railing;
- Plant new bed areas;
- Upgrade the 180 degree theater;
- Upgrade the Niagara Gorge “CAM” system; and
- Upgrade the traditional exhibits including gorge geological history and formation exhibit.

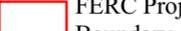
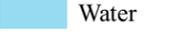
The Schoellkopf Overlook [Conceptual Design](#), the Niagara Gorge Discovery Center [Proposed Floor Plan](#), and [Interior View and Proposed Exhibits](#) show the outdoor improvements, interior concept development plan and the proposed floor plan.



**NIAGARA POWER PROJECT (FERC Project No. 2216)  
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**Figure 5-1  
Proposed Recreation Facilities**

**Legend**

- |  |  |   |                       |
|--|--|---|-----------------------|
|  | Road                                     |  | FERC Project Boundary |
|  | Recreation Facility                      |  | Water                 |
|  | Proposed Recreation Facility Enhancement |  | City/Town             |

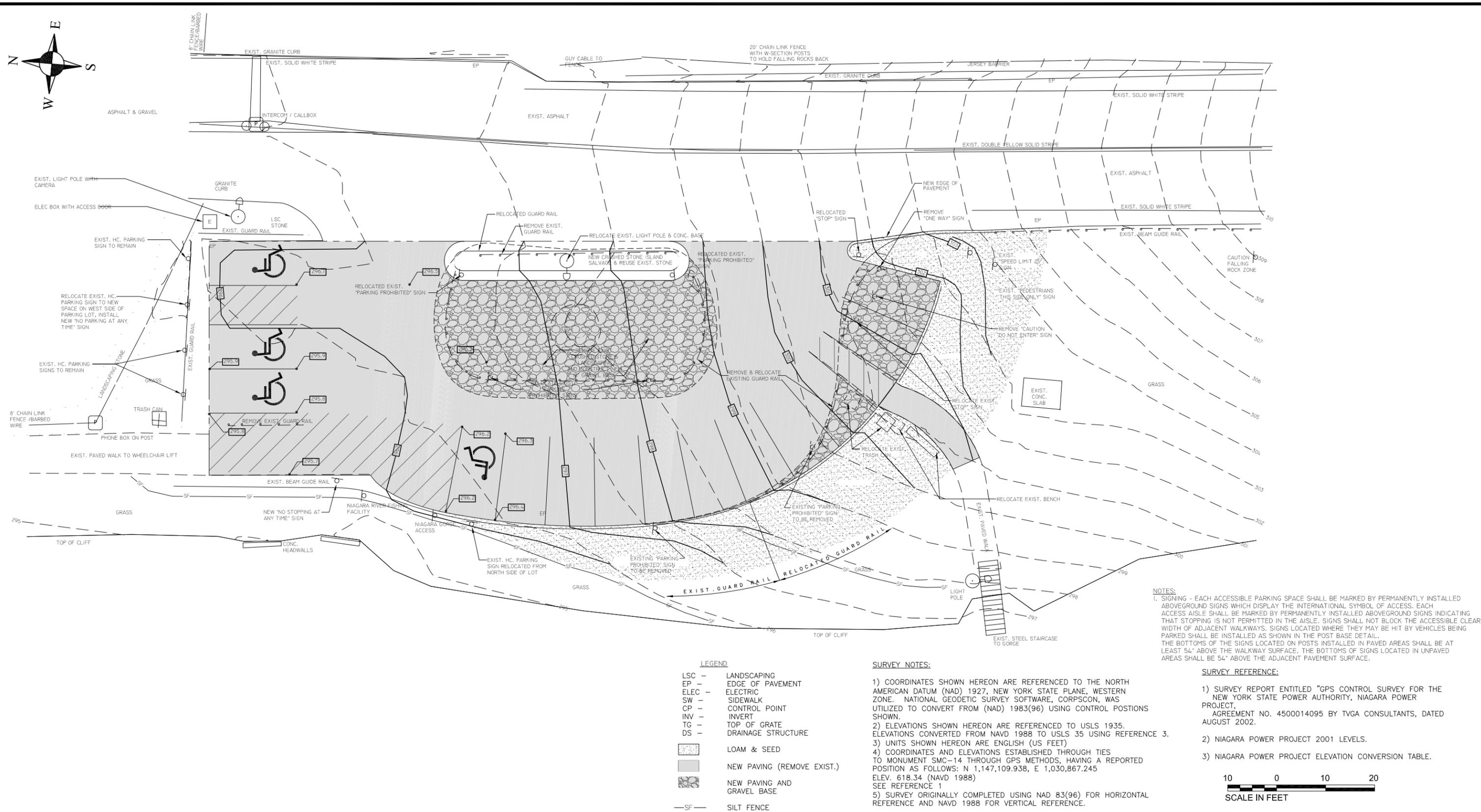
0 0.25 0.5 1 Miles 1 inch equals 0.5 miles



 **New York Power Authority**



08/22/2008 1:26pm - anile - K:\12513\Civil\Moses Fishing Pier\REC. PLAN SUBMITTAL\Final Rec. Plan Submittal\12513-CI-MFPPrev.dwg



**NOTES:**  
 1. SIGNING - EACH ACCESSIBLE PARKING SPACE SHALL BE MARKED BY PERMANENTLY INSTALLED ABOVEGROUND SIGNS WHICH DISPLAY THE INTERNATIONAL SYMBOL OF ACCESS. EACH ACCESS AISLE SHALL BE MARKED BY PERMANENTLY INSTALLED ABOVEGROUND SIGNS INDICATING THAT STOPPING IS NOT PERMITTED IN THE AISLE. SIGNS SHALL NOT BLOCK THE ACCESSIBLE CLEAR WIDTH OF ADJACENT WALKWAYS. SIGNS LOCATED WHERE THEY MAY BE HIT BY VEHICLES BEING PARKED SHALL BE INSTALLED AS SHOWN IN THE POST BASE DETAIL. THE BOTTOMS OF THE SIGNS LOCATED ON POSTS INSTALLED IN PAVED AREAS SHALL BE AT LEAST 54" ABOVE THE WALKWAY SURFACE. THE BOTTOMS OF SIGNS LOCATED IN UNPAVED AREAS SHALL BE 54" ABOVE THE ADJACENT PAVEMENT SURFACE.

**SURVEY REFERENCE:**  
 1) SURVEY REPORT ENTITLED "GPS CONTROL SURVEY FOR THE NEW YORK STATE POWER AUTHORITY, NIAGARA POWER PROJECT, AGREEMENT NO. 4500014095 BY TVGA CONSULTANTS, DATED AUGUST 2002.  
 2) NIAGARA POWER PROJECT 2001 LEVELS.  
 3) NIAGARA POWER PROJECT ELEVATION CONVERSION TABLE.



- LEGEND**
- LSC - LANDSCAPING
  - EP - EDGE OF PAVEMENT
  - ELEC - ELECTRIC
  - SW - SIDEWALK
  - CP - CONTROL POINT
  - INV - INVERT
  - TG - TOP OF GRATE
  - DS - DRAINAGE STRUCTURE
  - [Pattern] - LOAM & SEED
  - [Pattern] - NEW PAVING (REMOVE EXIST.)
  - [Pattern] - NEW PAVING AND GRAVEL BASE
  - SF- - SILT FENCE

**SURVEY NOTES:**  
 1) COORDINATES SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN DATUM (NAD) 1927, NEW YORK STATE PLANE, WESTERN ZONE. NATIONAL GEODETIC SURVEY SOFTWARE, CORPSCON, WAS UTILIZED TO CONVERT FROM (NAD) 1983(96) USING CONTROL POSTIONS SHOWN.  
 2) ELEVATIONS SHOWN HEREON ARE REFERENCED TO USLS 1935. ELEVATIONS CONVERTED FROM NAVD 1988 TO USLS 35 USING REFERENCE 3.  
 3) UNITS SHOWN HEREON ARE ENGLISH (US FEET)  
 4) COORDINATES AND ELEVATIONS ESTABLISHED THROUGH TIES TO MONUMENT SMC-14 THROUGH GPS METHODS, HAVING A REPORTED POSITION AS FOLLOWS: N 1,147,109.938, E 1,030,867.245 ELEV. 618.34 (NAVD 1988) SEE REFERENCE 1  
 5) SURVEY ORIGINALLY COMPLETED USING NAD 83(96) FOR HORIZONTAL REFERENCE AND NAVD 1988 FOR VERTICAL REFERENCE.

REVISIONS	NO.	DATE	DESCRIPTION	BY	CHECKED	DATE
D	08/31/07	ISSUED FOR RECREATION PLAN SUBMITTAL	JLB	JEP		
C	07/09/07	ISSUED FOR 50% NYPA REVIEW	JLB	JEP		
B	03/09/07	ISSUED FOR NYPA REVIEW	JLB	JEP		
A	02/22/07	ISSUED FOR INTERNAL REVIEW	JLB	JEP		

**RECREATION PLAN SUBMITTAL**

**E-PRO**  
 ENGINEERING & ENVIRONMENTAL CONSULTING, LLC  
 249 WESTERN AVE, AUGUSTA, MAINE 04330

CONTRACT DWS NO.: 12513-C PROJECT NO.: 12513

**Gomez and Sullivan Engineers, P.C.**  
 Engineers and Environmental Scientists  
 Utica, NY 13502 Weare, NH 03281  
 Williamsville, NY 14221

**ROBERT MOSES FISHING PIER PARKING AREA IMPROVEMENTS**

**FIGURE 5.1-1 OVERALL SITE PLAN**

PREPARED BY:  
 E-PRO ENGINEERING & ENVIRONMENTAL CONSULTING

SCALE: NOTED

DWG. NO: CI  
 SHEET NO.:

CONTRACT NO.

**SOIL EROSION AND SEDIMENT CONTROL NOTES**

- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ALL DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN THREE (3) WEEKS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
- PERMANENT VEGETATION TO BE SEEDING OR SODDED ON ALL EXPOSED AREAS IMMEDIATELY AFTER FINAL GRADING. MULCH TO BE USED AS NECESSARY FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
- ALL WORK TO BE DONE IN ACCORDANCE WITH THE NEW YORK, "GUIDELINES FOR URBAN EROSION & SEDIMENT CONTROL".
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OF ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
- SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
- ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAY WILL BE REMOVED IMMEDIATELY.
- STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD, SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE.
- ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #2.

**TOPSOILING SCHEDULE**

- TOPSOIL SHALL BE OF QUALITY WHICH WILL SUPPORT HEALTHY, VIGOROUS PLANT GROWTH. IT SHALL BE NATURAL, WORKABLE LOAM, FREE OF REFUSE, ROOTS, STONES, BRUSH, WEEDS OR OTHER MATERIAL THAT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANTS. RE-USE OF EXISTING STOCKPILED TOPSOIL IS ACCEPTABLE PROVIDED IT MEETS THIS CRITERION.
- THE PH RANGE TO BE 5.0 TO 7.5 SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMOLES PER CENTIMETER). OFFSITE TOPSOIL TO HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75% (IT MAY BE RAISED BY ADDITIVES, HUMUS, PEATMOSS, ETC.).
- PREPARE SITE TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AS PER PERMANENT OR TEMPORARY VEGETATIVE STANDARDS. TEST SUBSOIL FOR LIME REQUIREMENT AND RAISE PH LEVEL TO 6.5 AND WORK INTO SUBSOIL TO A DEPTH OF FOUR (4) INCHES.
- INSTALL REQUIRED EROSION CONTROL PRACTICES AND FACILITIES.
- SCARIFY SURFACE OF SOIL PRIOR TO APPLYING TOPSOIL. HANDLE TOPSOIL ONLY WHEN IT IS DRY ENOUGH TO PREVENT DAMAGING THE SOIL STRUCTURE.
- INSTALL AT A DEPTH OF FIVE (5) INCHES (UNSETTLED).

**TEMPORARY VEGETATIVE COVER STANDARDS**

- TO BE UTILIZED FOR SOILS EXPOSED FOR PERIODS OF THREE (3) WEEKS TO 12 MONTHS OR OTHERWISE NOTED.
- GRADE SITE AS REQUIRED TO PERMIT USE OF CONVENTIONAL EQUIPMENT TO PREPARE SEEDBED. INSTALL REQUIRED EROSION CONTROL PRACTICES OR FACILITIES PRIOR TO SEEDBED PREPARATION.
- APPLY LIMESTONE AND FERTILIZER PER SOIL TEST RESULTS. IN LIEU OF SOIL TESTS, THE FOLLOWING SHALL APPLY: FERTILIZERS, 5-10-5 AT A RATE OF 610 LBS/AC (14 LBS/1000 SF) OR EQUIVALENT.
- WORK LIMESTONE AND FERTILIZER INTO SOILS AT A DEPTH OF FOUR (4) INCHES WITH DISC SPRING - TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. FINAL WORK SHOULD FOLLOW THE GENERAL CONTOUR. TILL SOILS TO ACHIEVE UNIFORM SEEDBED.
- INSPECT SEEDBED BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA SHALL BE RETILLED.
- SEED WITH ANNUAL RYEGRASS AT A RATE OF 30 LB/AC (0.7 LB/1000 SF) AT A DEPTH OF ¼ TO ½ INCH DURING MARCH 15 TO JUNE 1 AND AUGUST 15 TO SEPTEMBER 15 (NOTE: SUMMER SEEDING PERMITTED IF SOIL MOISTURE IS ADEQUATE OR IRRIGATION IS PROVIDED AND MULCHED WITH UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT A RATE OF 1 ½ TO 2 TONS/AC (70 TO 90 LBS/1000 SF), UNIFORMLY SPREAD TO ACHIEVE 75% TO 90% COVERAGE.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). THE LATTER MAY BE JUSTIFIABLE FOR LARGE STEEP AREAS WHERE CONVENTIONAL VEHICLES MAY NOT TRAVEL.

**PERMANENT VEGETATIVE COVER STANDARDS**

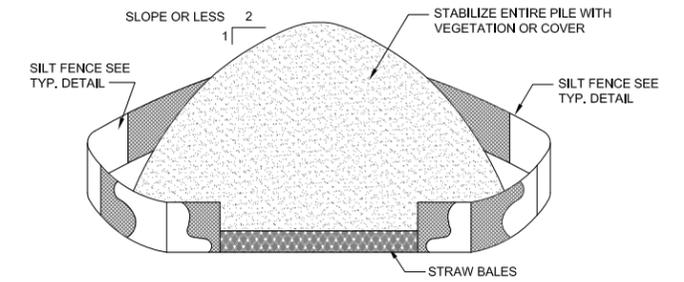
- APPLY TOPSOIL PER TOPSOIL SCHEDULE.
- APPLY LIMESTONE AND FERTILIZER PER SOIL TEST RESULTS. IN LIEU OF SOIL TESTS, THE FOLLOWING SHALL APPLY: FERTILIZERS, 5-10-5 AT A RATE OF 610 LBS/AC (14 LBS/1000 SF) OR EQUIVALENT.
- WORK LIMESTONE AND FERTILIZER INTO SOILS AT A DEPT OF FOUR (4) INCHES WITH DISC SPRING-TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. FINAL WORK SHOULD FOLLOW THE GENERAL CONTOUR. TILL SOILS UNTIL A UNIFORM FINE SEEDBED IS ESTABLISHED. ROLL AND FIRM SEEDBED (EXCEPT CLAY, SILTY SOILS AND COARSE SANDS).
- REMOVE FROM SURFACE ALL STONES, DEBRIS LARGER THAN TWO (2) INCHES IN ANY DIMENSION PRIOR TO SEEDING.

- INSPECT SEEDBED, IF COMPACTED, RETILL AND FIRM AS REQUIRED.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER AT A DEPTH OF ¼ TO ½ INCH. HYDROSEEDINGS WHICH ARE MULCHED NEED NOT BE WORKED INTO THE SOIL. SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATION WITH A ROLLER OR LIGHT DRAG (EXCEPT FOR CULTIPACKER TYPE SEEDER OR HYDROSEEDER). SEEDING TO FOLLOW GENERAL CONTOUR.
 

SEED MIXTURE:	VARIETY	RATE IN lbs/ac (lbs/1000 <sup>2</sup> ft)
CREEPING RED FESCUE OR TALL FESCUE	ENSYLVA	20 (.5)
	KY-31	2 (.1)
	COMMON	5 (.1)
	PENNFINE	0 (.2)
PERENNIAL RYEGRASS AND BIRDSFOOT TREFOLI	PENNFINE	0 (.2)
	EMPIRE	
- IRRIGATE TO ACHIEVE SUFFICIENT SOIL MOISTURE A MINIMUM OF ½ INCH TWICE PER DAY UNTIL VEGETATION IS ESTABLISHED.
- MULCH WHENEVER SOIL MOISTURE IS SUFFICIENT, MULCH PER OUT OF SEASON STABILIZATION STANDARDS OR STABILIZATION WITH MULCH STANDARDS AS PER SOIL EROSION AND SEDIMENT CONTROL NOTES.
- TOPDRESSING: FERTILIZE 10-10-10 AT 400 LBS/AC (10 LBS/1000 SF) OR EQUIVALENT FOR FALL SEEDING TO BE DONE BETWEEN SEPTEMBER 1 TO OCTOBER 15. FOR SPRING SEEDING TO BE DONE BETWEEN MARCH 15 TO MAY 1. NOTE: MIXTURES DOMINATED BY LEGUMES OR WEEPING LOVEGRASS REQUIRE NO TOPDRESSING, BERMUDA GRASS TO BE TOPSEED BEFORE AUGUST 15.
- MULCHING: REQUIRED ON ALL AREAS TO BE SEEDING, AND SHALL APPLY TO ALL CONDITIONS.
  - MULCH MATERIALS SHOULD BE UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT THE RATE OF 1 ½ TO 2 TONS PER ACRE OR 70 TO 90 LBS PER 1000 SF. MULCH BLOWERS SHOULD NOT GRIND OR CHOP THE MATERIAL.
  - SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75% TO 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1000 SF SECTIONS AND DISTRIBUTE 70 TO 90 LBS WITHIN EACH SECTION.
  - MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SITE OF THE AREA, STEEPNESS OF SLOPES AND COSTS.
    - PEG AND TWINE-DRIVE 6 TO 10 WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY FOUR (4) FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
    - MULCH NETTINGS-STAPLE PAPER, JUTE, COTTON OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE DEGRADABLE NETTING IN AREAS TO BE MOWED.
    - MULCH ANCHORING TOOL-A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR STRAW MULCHES INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. TOOL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. THE OPERATION SHOULD BE DONE ON THE CONTOUR.

**STABILIZATION WITH MULCH STANDARD**

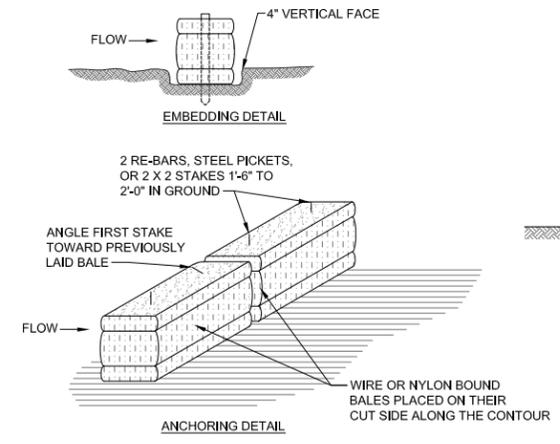
- EXPOSED SOILS NOT SUBJECT TO CONSTRUCTION AND BEYOND RECOMMENDED SEEDING DATES OR VEGETATION COVER REQUIRING MULCH COVER FOR DROUGHTY SITES SHALL BE MULCHED (INCLUDING AS A TEMPORARY MEASURE UNTIL A MORE SUITABLE PROTECTION IS DEVELOPED).
- GRADE AS REQUIRED TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR APPLYING AND ANCHORING MULCH. IF REQUIRED AS A COVER FOR PERMANENT VEGETATION PREPARATION SHALL CONFORM TO PERMANENT VEGETATIVE STANDARDS.
- INSTALL REQUIRED EROSION CONTROL PRACTICES AND FACILITIES PRIOR TO MULCH APPLICATION.
- SITE REQUIRING TEMPORARY COVER OR UNTIL A MORE SUITABLE PROTECTION IS DEVELOPED, MULCH WITH UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT A RATE OF 1 ½ TO 2 TONS/AC (70 TO 90 LBS/1000 SF). SPREAD UNIFORMLY TO ACHIEVE 75% TO 90% SOIL COVERAGE. SITES REQUIRING OUT OF SEASON STABILIZATION, MULCH AS ABOVE AT A RATE OF 2 TO 2 ½ TONS/AC (90-115 LBS 1000 SF) AND ANCHOR MULCH WITH MULCH ANCHORING TOOL, LIQUID BINDERS OR NETTING TIEDOWNS.
  - PEG AND TWINE-DRIVE 6 TO 10 WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY FOUR (4) FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER MULCHING. STRETCH TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERNS. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
  - MULCH NETTINGS STAPLE PAPER, JUTE, COTTON OR PLASTIC NETTINGS OVER HAY OR STRAW MULCH NETTING TO BE JUTE MESH OR APPROVED EQUAL.



- INSTALLATION NOTES:**
- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
  - MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
  - UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

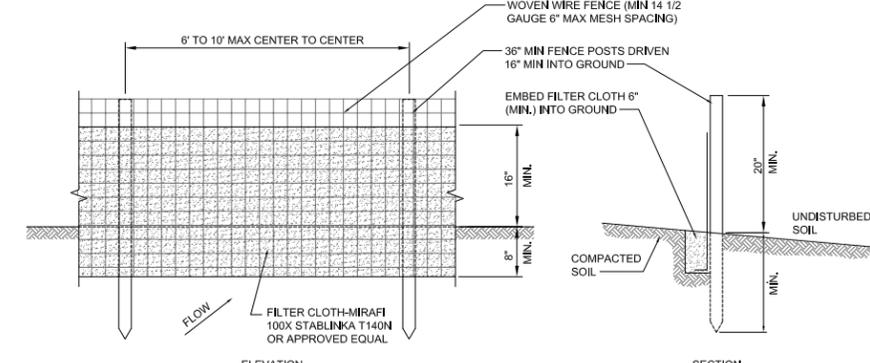
**TYPICAL TOPSOIL STOCKPILE**

SCALE: 1/4"=1'-0"



**STRAW BALE BARRIER DETAIL**

SCALE: 1/4"=1'-0"



- WOVEN WIRE FENCE TO BE FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
  - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDSECTION.
  - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- |                     |   |
|---------------------|---|
| POSTS:              | STEEL "1" OR "1/2" TYPE OR 2" HARDWOOD.                   |
| FENCE:              | WOVEN WIRE, 14 1/2 GA 6" MAX MESH OPENING.                |
| FILTER CLOTH:       | FILTER X, MIRAF 100X, STABILINKA T140N OR APPROVED EQUAL. |
| PREFABRICATED UNIT: | ENVIROFENCE OR APPROVED EQUAL                             |

**SILT FENCE DETAILS**

SCALE: 1/2"=1'-0"

JLB				
JEP				
DWN	DWN	DWN	PROJ	
CHK	CHK	CHK	APP.	

**RECREATION PLAN SUBMITTAL**

REV NO	DATE	DESCRIPTION
A	11/05/07	ISSUED FOR RECREATION PLAN SUBMITTAL

**REVISIONS**



Engineering & Environmental Consulting, LLC  
249 Western Ave, Augusta, Maine 04330

CONTRACT DWG NO.: 12513-C2 PROJECT NO.: 12513

**Gomez and Sullivan Engineers, P.C.**  
Engineers and Environmental Scientists  
Utica, NY 13502 Weare, NH 03281  
Williamsville, NY 14221

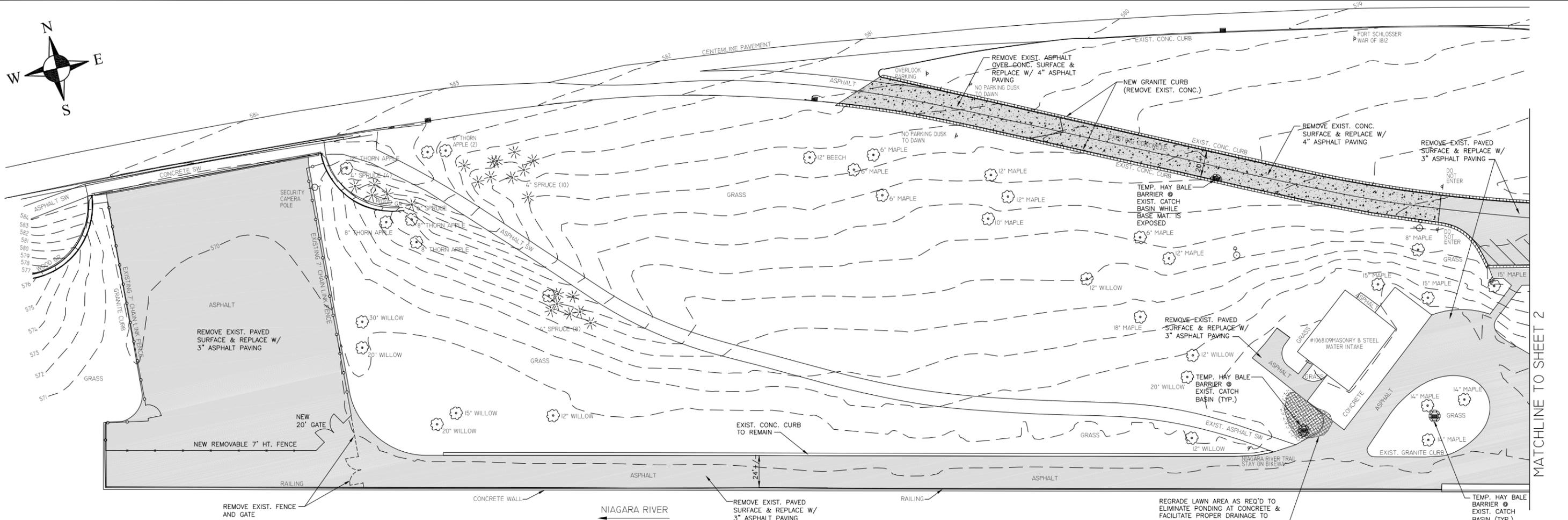
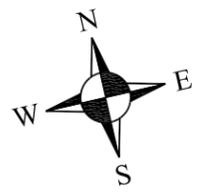
**ROBERT MOSES FISHING PIER PARKING AREA IMPROVEMENTS**

**FIGURE 5.1-2 EROSION CONTROL NOTES & DETAILS**

PREPARED BY: E-PRO Engineering & Environmental Consulting	DWG.NO: C2 SHEET NO.:
SCALE: NOTED	CONTRACT NO.



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PARTIAL SITE PLAN

- LEGEND**
- SW - SIDEWALK
  - GR - GUIDE RAIL
  - NEW CONCRETE CURB (REMOVE EXIST.)
  - NEW GRANITE CURB (REMOVE EXIST. CONC. CURB)
  - EXISTING CURB TO REMAIN
  - REPAIR EXIST. COBBLESTONE
  - NEW COBBLE STONE TO MATCH EXIST.
  - NEW 3" PAVING (REMOVE EXIST. PAVING)
  - NEW 4" PAVING (REMOVE EXIST. CONC.)
  - LOAM & SEED DISTURBED AREAS
  - AREA TO BE REGRADED
  - REUSE EXISTING SIGNS UNLESS OTHERWISE NOTED.
  - TEMPORARY HAY BALE BARRIER AROUND EXIST. CATCH BASIN

RECREATION PLAN  
SUBMITTAL



Engineering & Environmental Consulting, LLC  
249 Western Ave, Augusta, Maine 04330

**Gomez and Sullivan Engineers, P.C.**  
Engineers and Environmental Scientists  
Utica, NY 13502 Weare, NH 03281  
Williamsville, NY 14221



UPPER NIAGARA OBSERVATION  
PARKING LOT IMPROVEMENTS & BULKHEAD FENCE

Figure 5.1-3  
PARTIAL SITE PLAN

PREPARED BY:  
E-PRO Engineering &  
Environmental Consulting

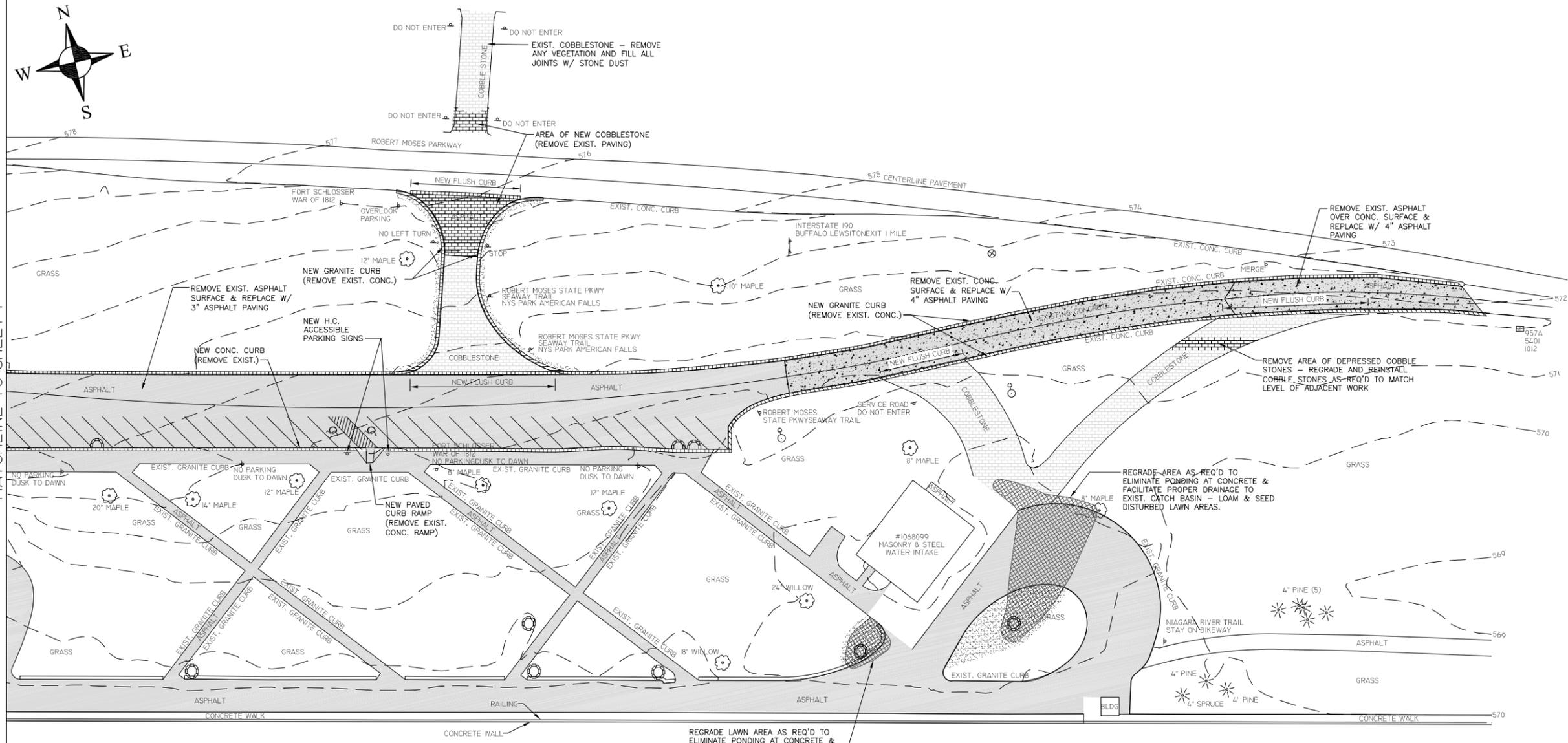
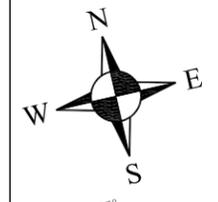
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SHEET NO.:  
CONTRACT NO.

REVISIONS

3/7/08 ISSUED FOR RECREATION PLAN SUBMITTAL

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08/22/2008 1:25pm - onile - K:\12513\Civil\Intakes\_parking Lot & Bulkhead Fence\REC. PLAN SUBMITTAL\Final Rec. Plan Submittal\12513-C2-FASREV.dwg



**REFERENCE:**  
 1) SEE SHEET 1 FOR NOTES AND LEGEND INFORMATION.  
 ALL EXISTING INFORMATION SHOWN ON THIS PLAN IS AS TAKEN FROM A MAP BY FISHER ASSOCIATES, P.E., L.S., P.C., WHO CERTIFY THAT THIS MAP WAS PREPARED FROM THE NOTES OF AN INSTRUMENT SURVEY COMPLETED ON NOVEMBER 20, 2006, AND THE REFERENCES NOTED HEREON. TO THE BEST OF OUR KNOWLEDGE ALL INFORMATION SHOWN HEREON IS TRUE AND ACCURATE.

**NOTE:**  
 1. REMOVE EXIST. ASPHALT SURFACE & REPLACE W/ 3" ASPHALT PAVING (TYPICAL AT ALL WALKWAYS)  
 2. EXIST. COBBLESTONE - REMOVE ANY VEGETATION AND FILL ALL JOINTS W/ STONE DUST



MATCHLINE TO SHEET 1

NO.	DATE	DESCRIPTION	BY	CHKD	APP'D
D	08/31/07	ISSUED FOR RECREATION PLAN SUBMITTAL	JLB	JEP	
C	07/09/07	ISSUED FOR 50% NYPA REVIEW	JLB	JEP	
B	03/09/07	ISSUED FOR NYPA REVIEW	JLB	JEP	
A	02/22/07	ISSUED FOR INTERNAL REVIEW	JLB	JEP	
REVISIONS					

**RECREATION PLAN SUBMITTAL**

Engineering & Environmental Consulting, LLC  
 249 Western Ave, Augusta, Maine 04330

CONTRACT DWG NO.: 12513-C2-SH2      PROJECT NO.: 12513

**Gomez and Sullivan Engineers, P.C.**  
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 Williamsville, NY 14221

UPPER NIAGARA OBSERVATION  
 PARKING LOT IMPROVEMENTS & BULKHEAD FENCE

**FIGURE 5.1-4  
 PARTIAL SITE PLAN**

PREPARED BY: E-PRO Engineering & Environmental Consulting	DWG. NO.: C2 SHEET NO.:
SCALE: 1"=40'	CONTRACT NO.

**SOIL EROSION AND SEDIMENT CONTROL NOTES**

- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ALL DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN THREE (3) WEEKS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STAW AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
- PERMANENT VEGETATION TO BE SEEDDED OR SODDED ON ALL EXPOSED AREAS IMMEDIATELY AFTER FINAL GRADING. MULCH TO BE USED AS NECESSARY FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
- ALL WORK TO BE DONE IN ACCORDANCE WITH THE NEW YORK "GUIDELINES FOR URBAN EROSION & SEDIMENT CONTROL".
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OF ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
- SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
- ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAY WILL BE REMOVED IMMEDIATELY.
- STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD, SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE.
- ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #2.

**TOPSOILING SCHEDULE**

- TOPSOIL SHALL BE OF QUALITY WHICH WILL SUPPORT HEALTHY, VIGOROUS PLANT GROWTH. IT SHALL BE NATURAL, WORKABLE LOAM, FREE OF REFUSE, ROOTS, STONES, BRUSH, WEEDS OR OTHER MATERIAL THAT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANTS. RE-USE OF EXISTING STOCKPILED TOPSOIL IS ACCEPTABLE PROVIDED IT MEETS THIS CRITERION.
- THE PH RANGE TO BE 5.0 TO 7.5 SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMOLES PER CENTIMETER). OFFSITE TOPSOIL TO HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75% (IT MAY BE RAISED BY ADDITIVES, HUMUS, PEATMOSS, ETC.).
- PREPARE SITE TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AS PER PERMANENT OR TEMPORARY VEGETATIVE STANDARDS. TEST SUBSOIL FOR LIME REQUIREMENT AND RAISE PH LEVEL TO 6.5 AND WORK INTO SUBSOIL TO A DEPTH OF FOUR (4) INCHES.
- INSTALL REQUIRED EROSION CONTROL PRACTICES AND FACILITIES.
- SCARIFY SURFACE OF SOIL PRIOR TO APPLYING TOPSOIL. HANDLE TOPSOIL ONLY WHEN IT IS DRY ENOUGH TO PREVENT DAMAGING THE SOIL STRUCTURE.
- INSTALL AT A DEPTH OF FIVE (5) INCHES (UNSETTLED).

**TEMPORARY VEGETATIVE COVER STANDARDS**

- TO BE UTILIZED FOR SOILS EXPOSED FOR PERIODS OF THREE (3) WEEKS TO 12 MONTHS OR OTHERWISE NOTED.
- GRADE SITE AS REQUIRED TO PERMIT USE OF CONVENTIONAL EQUIPMENT TO PREPARE SEEDBED. INSTALL REQUIRED EROSION CONTROL PRACTICES OR FACILITIES PRIOR TO SEEDBED PREPARATION.
- APPLY LIMESTONE AND FERTILIZER PER SOIL TEST RESULTS. IN LIEU OF SOIL TESTS, THE FOLLOWING SHALL APPLY: FERTILIZERS, 5-10-5 AT A RATE OF 610 LBS/AC (14 LBS/1000 SF) OR EQUIVALENT.
- WORK LIMESTONE AND FERTILIZER INTO SOILS AT A DEPTH OF FOUR (4) INCHES WITH DISC SPRING - TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. FINAL WORK SHOULD FOLLOW THE GENERAL CONTOUR. TILL SOILS TO ACHIEVE UNIFORM SEEDBED.
- INSPECT SEEDBED BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA SHALL BE RETILLED.
- SEED WITH ANNUAL RYEGRASS AT A RATE OF 30 LB/AC (0.7 LB/1000 SF) AT A DEPTH OF 1/4 TO 1/2 INCH DURING MARCH 15 TO JUNE 1 AND AUGUST 15 TO SEPTEMBER 15 (NOTE: SUMMER SEEDING PERMITTED IF SOIL MOISTURE IS ADEQUATE OR IRRIGATION IS PROVIDED AND MULCHED WITH UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT A RATE OF 1 1/2 TO 2 TONS/AC (70 TO 90 LBS/1000 SF), UNIFORMLY SPREAD TO ACHIEVE 75% TO 90% COVERAGE.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). THE LATTER MAY BE JUSTIFIABLE FOR LARGE STEEP AREAS WHERE CONVENTIONAL VEHICLES MAY NOT TRAVEL.

**PERMANENT VEGETATIVE COVER STANDARDS**

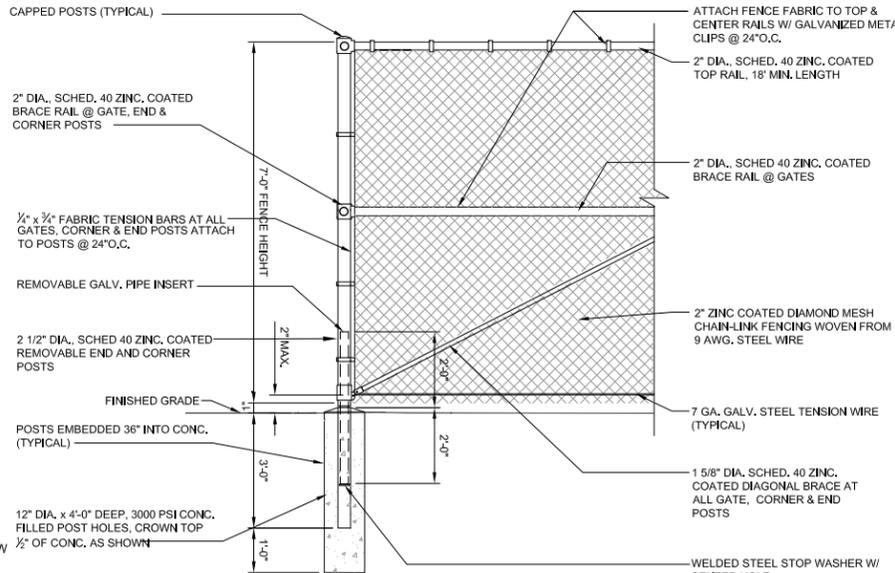
- APPLY TOPSOIL PER TOPSOIL SCHEDULE.
- APPLY LIMESTONE AND FERTILIZER PER SOIL TEST RESULTS. IN LIEU OF SOIL TESTS, THE FOLLOWING SHALL APPLY: FERTILIZERS, 5-10-5 AT A RATE OF 610 LBS/AC (14 LBS/1000 SF) OR EQUIVALENT.
- WORK LIMESTONE AND FERTILIZER INTO SOILS AT A DEPT OF FOUR (4) INCHES WITH DISC SPRING-TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. FINAL WORK SHOULD FOLLOW THE GENERAL CONTOUR. TILL SOILS UNTIL A UNIFORM FINE SEEDBED IS ESTABLISHED. ROLL AND FIRM SEEDBED (EXCEPT CLAY, SILTY SOILS AND COARSE SANDS).
- REMOVE FROM SURFACE ALL STONES, DEBRIS LARGER THAN TWO (2) INCHES IN ANY DIMENSION PRIOR TO SEEDING.

- INSPECT SEEDBED. IF COMPACTED, RETILL AND FIRM AS REQUIRED.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER AT A DEPTH OF 1/4 TO 1/2 INCH. HYDROSEEDINGS WHICH ARE MULCHED NEED NOT BE WORKED INTO THE SOIL. SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATION WITH A ROLLER OR LIGHT DRAG (EXCEPT FOR CULTIPACKER TYPE SEEDER OR HYDROSEEDER). SEEDING TO FOLLOW GENERAL CONTOUR.
  - SEED MIXTURE:
 

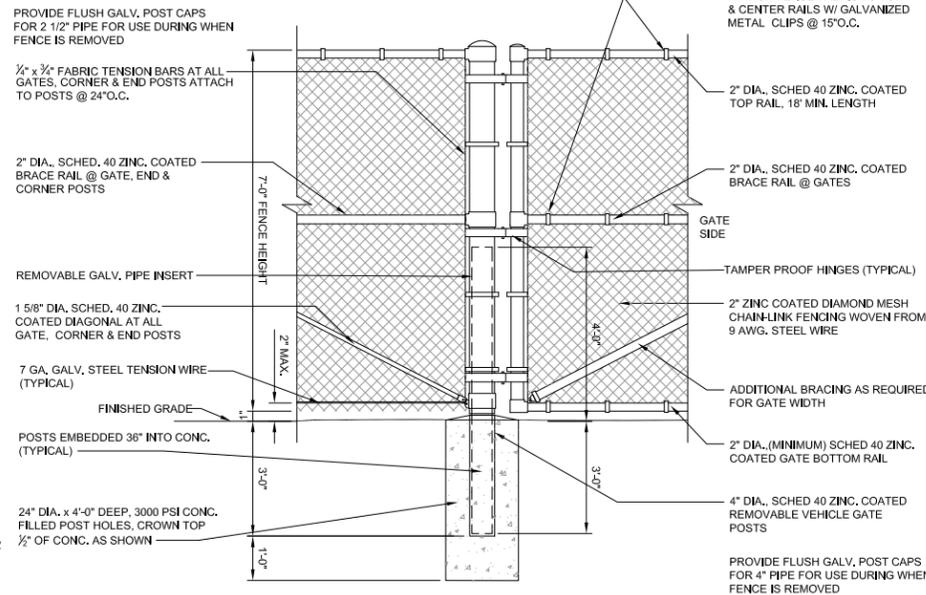
VARIETY	RATE IN lbs/ac (lbs/1000 <sup>2</sup> ft)
CREeping RED FESCUE OR TALL FESCUE	2 (.5)
REdTOP OR PERENNIAL RYEGRASS AND BIRDSFOOT TREFLOL	5 (.1)
	0 (.2)
  - SEEDING DATES: 3/15 TO 6/1, 6/15 TO 9/15
- IRRIGATE TO ACHIEVE SUFFICIENT SOIL MOISTURE A MINIMUM OF 1/2 INCH TWICE PER DAY UNTIL VEGETATION IS ESTABLISHED.
- MULCH WHENEVER SOIL MOISTURE IS SUFFICIENT, MULCH PER OUT OF SEASON STABILIZATION STANDARDS OR STABILIZATION WITH MULCH STANDARDS AS PER SOIL EROSION AND SEDIMENT CONTROL NOTES.
- TOPDRESSING: FERTILIZE 10-10-10 AT 400 LBS/AC (10 LBS/1000 SF) OR EQUIVALENT FOR FALL SEEDING TO BE DONE BETWEEN SEPTEMBER 1 TO OCTOBER 15. FOR SPRING SEEDING TO BE DONE BETWEEN MARCH 15 TO MAY 1. NOTE: MIXTURES DOMINATED BY LEGUMES OR WEEPIING LOVEGRASS REQUIRE NO TOPDRESSING. BERMUDA GRASS TO BE TOPSEED BEFORE AUGUST 15.
- MULCHING: REQUIRED ON ALL AREAS TO BE SEEDDED, AND SHALL APPLY TO ALL CONDITIONS.
  - MULCH MATERIALS SHOULD BE UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE OR 70 TO 90 LBS PER 1000 SF. MULCH BLOWERS SHOULD NOT GRIND OR CHOP THE MATERIAL.
  - SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75% TO 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1000 SF SECTIONS AND DISTRIBUTE 70 TO 90 LBS WITHIN EACH SECTION.
  - MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SITE OF THE AREA, STEEPNESS OF SLOPES AND COSTS.
    - PEG AND TWINE-DRIVE 6 TO 10 WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY FOUR (4) FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
    - MULCH NETTINGS-STAPLE PAPER, JUTE, COTTON OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE DEGRADABLE NETTING IN AREAS TO BE MOWED.
    - MULCH ANCHORING TOOL-A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR SALT HAY OR STRAW MULCHES INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. TOOL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. THE OPERATION SHOULD BE DONE ON THE CONTOUR.

**STABILIZATION WITH MULCH STANDARD**

- EXPOSED SOILS NOT SUBJECT TO CONSTRUCTION AND BEYOND RECOMMENDED SEEDING DATES OR VEGETATION COVER REQUIRING MULCH COVER FOR DROUGHTY SITES SHALL BE MULCHED (INCLUDING AS A TEMPORARY MEASURE UNTIL A MORE SUITABLE PROTECTION IS DEVELOPED).
- GRADE AS REQUIRED TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR APPLYING AND ANCHORING MULCH. IF REQUIRED AS A COVER FOR PERMANENT VEGETATION PREPARATION SHALL CONFORM TO PERMANENT VEGETATIVE STANDARDS.
- INSTALL REQUIRED EROSION CONTROL PRACTICES AND FACILITIES PRIOR TO MULCH APPLICATION.
- SITE REQUIRING TEMPORARY COVER OR UNTIL A MORE SUITABLE PROTECTION IS DEVELOPED, MULCH WITH UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT A RATE OF 1 1/2 TO 2 TONS/AC (70 TO 90 LBS/1000 SF). SPREAD UNIFORMLY TO ACHIEVE 75% TO 90% SOIL COVERAGE. SITES REQUIRING OUT OF SEASON STABILIZATION, MULCH AS ABOVE AT A RATE OF 2 TO 2 1/2 TONS/AC (90-115 LBS 1000 SF) AND ANCHOR MULCH WITH MULCH ANCHORING TOOL, LIQUID BINDERS OR NETTING TIEDOWNS.
  - MULCH ANCHORING METHODS TO BE EMPLOYED IMMEDIATELY AFTER PLACEMENT OF STRAW. IT MAY CONSIST OF THE FOLLOWING:
    - PEG AND TWINE-DRIVE 6 TO 10 WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY FOUR (4) FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER MULCHING. STRETCH TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERNS. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
    - MULCH NETTINGS STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS OVER STRAW MULCH NETTING TO BE JUTE MESH OR APPROVED EQUAL.



**REMOVABLE CORNER POST DETAIL "C"**  
NOT TO SCALE



**REMOVABLE VEHICLE GATE POST DETAIL "B"**  
NOT TO SCALE

**BASIC COMPOSITION**  
FABRIC SHALL BE 9 A,W,G, OR HEAVIER ZINC-COATED MESH WITH OPENINGS NO LARGER THAN 2".

ALL ITEMS SHALL BE GALVANIZED, ZINC-COATED TO ASTM SPECIFICATIONS, INCLUDING ALL POSTS, GATES AND HARDWARE. SPOT WELDS, DAMAGED CAPS POSTS, RAILS AND OTHER ITEMS SHALL BE PROTECTED FROM WEATHER BY FIELD APPLICATION OF "GALVANOX". SPOT WELDS SHALL BE TO THE PIPE SURFACE, NOT JUST TO THE GALVANIZED SURFACE.

**POSTS**  
ALL POSTS SHALL BE ASTM TYPE 1, SCHEDULE 40, ZINC COATED STEEL POSTS.

ALL POSTS SHALL BE SET (EMBEDDED) TO A MINIMUM DEPTH OF 36" BELOW FINISHED GRADE IN 3000 PSL CONCRETE IN A POST HOLE THAT IS 12" IN DIAMETER AND 48" DEEP. THE CONCRETE SHALL EXTEND 1/2" ABOVE FINISHED GRADE AND BE CROWNED AWAY FROM THE POLE. VEHICLE GATE POSTS SHALL BE SET (EMBEDDED) TO A DEPTH OF 36" BELOW FINISHED GRADE IN A POST HOLE THAT IS 24" IN DIAMETER AND 48" DEEP.

LINE POSTS SHALL HAVE A MINIMUM NOMINAL OUTSIDE DIAMETER OF 2" AND BE PLACED EQUIDISTANT NOT MORE THAN 9' APART.

VEHICLE GATE POSTS SHALL HAVE A MINIMUM NOMINAL OUTSIDE DIAMETER OF 4".

END, CORNER AND PULL POSTS SHALL HAVE A MINIMUM NOMINAL OUTSIDE DIAMETER OF 2 1/2".

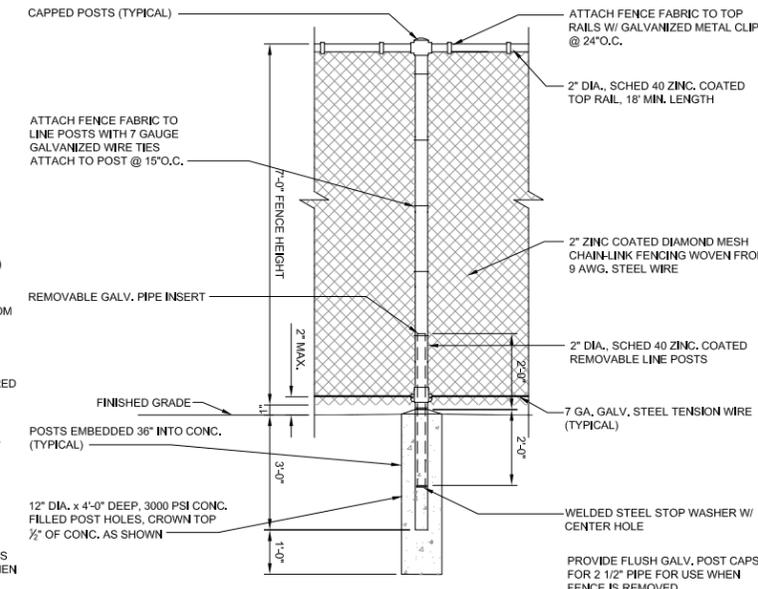
RAILS  
TOP RAILS SHALL BE ASTM TYPE 1, SCHEDULE 40 ZINC COATED STEEL WITH A MINIMUM NOMINAL OUTSIDE DIAMETER OF 2" AND A MINIMUM LENGTH OF 18'-0". COUPLINGS SHALL BE NOT LESS THAN 6" LONG, .070" THICK, AND SHALL ALLOW FOR EXPANSION.

FENCE FABRIC ATTACHMENT TO TOP RAILS SHALL BE MADE WITH CLIPS @ 24"oc. WIRE TIES ARE NOT PERMITTED.

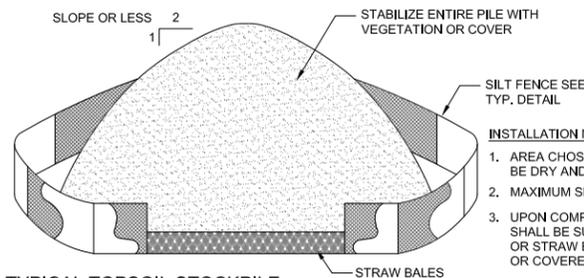
**GATES**  
GATES SHALL BE CONSTRUCTED FROM THE SAME MATERIAL AS THE FENCE. HAVE A MINIMUM NOMINAL OUTSIDE DIAMETER OF 2 1/2" OR LARGER BASED ON THE OPENING SIZE. CORNERS SHALL BE WELDED. ALL GATES SHALL HAVE PROVISIONS FOR LOCKING, SECURE HINGES AND SHALL HAVE ADEQUATE BRACING TO PREVENT SAGGING. ANY BOLTS OR HINGE PINS SHALL BE OF TAMPER-PROOF TYPE AND ANY EXPOSED BOLTS AND NUTS SHALL BE SPOT WELDED. ALL GATE LOCKING MECHANISMS SHALL BE OF A "DROP BAR" TYPE WELDED TO THE GATE FRAME. HINGE TYPE MECHANISMS SHALL NOT BE PERMITTED. THE MAXIMUM SPACE TO THE BOTTOM OF THE GATE SHALL BE 2". FABRIC ATTACHMENT SHALL USE GALVANIZED CLIPS @ 15"oc. FOR TOP AND CENTER RAILS.

**BRACING**  
DIAGONAL BRACING TO THE NEAREST POST IS REQUIRED AT ALL CORNER AND GATE POSTS USING THE SAME MATERIAL AS THE TOP RAILS.

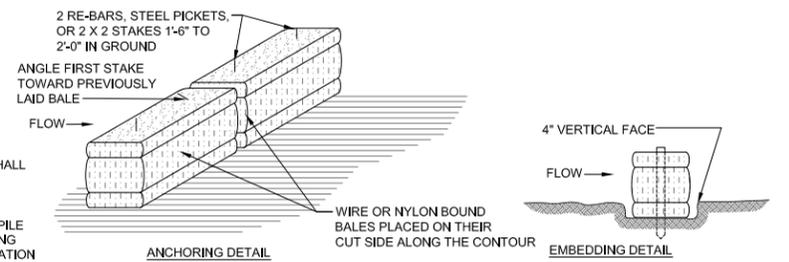
**FABRIC ATTACHMENT**  
FENCE FABRIC SHALL BE CONNECTED TO GATES, TERMINAL POSTS, TOP RAILS AND BOTTOM RAILS USING GALVANIZED METAL CLIPS. WIRE TIES ARE NOT PERMITTED AT THESE LOCATIONS. WIRE TIES COMPOSED OF 7 GAUGE GALVANIZED WIRE, KNUCKLEOVER, SHALL BE USED TO ATTACH FABRIC TO LINE POSTS ONLY. THE FENCE FABRIC SHALL BE ATTACHED TO THE LINE POSTS AND GATES AT INTERVALS NOT TO EXCEED 15', AND TO TOP RAILS AT INTERVALS NOT TO EXCEED 24". THE FABRIC SHALL BE TERMINATED AT ALL GATES AND CORNER POSTS, AND ATTACH TO SUCH POSTS USING TENSION BARS AND CLAMPS. THE FABRIC SHALL BE INSTALLED TO THE OUTSIDE OF THE FENCING WITH SUFFICIENT TENSION TO PROVIDE A SMOOTH UNIFORM APPEARANCE.



**REMOVABLE LINE POST DETAIL "A"**  
NOT TO SCALE



**TYPICAL TOPSOIL STOCKPILE**  
SCALE: 1/4"=1'-0"



**STRAW BALE BARRIER DETAIL**  
SCALE: 1/4"=1'-0"

REV NO	DATE	DESCRIPTION	JLB	JEP	DWN	DWN	DWN	PROJ
A	10/05/07	ISSUED FOR RECREATION PLAN SUBMITTAL						
			CHK	CHK	CHK		APP.	
REVISIONS								

**RECREATION PLAN SUBMITTAL**

**E-PRO**  
Engineering & Environmental Consulting, LLC  
249 Western Ave, Augusta, Maine 04330

CONTRACT DWG NO.: 12513-C3 PROJECT NO.: 12513

**Gomez and Sullivan Engineers, P.C.**  
Engineers and Environmental Scientists  
Utica, NY 13502 Weare, NH 03281  
Williamsville, NY 14221

UPPER NIAGARA RIVER OBSERVATION AREA  
PARKING LOT IMPROVEMENTS & BULKHEAD FENCE

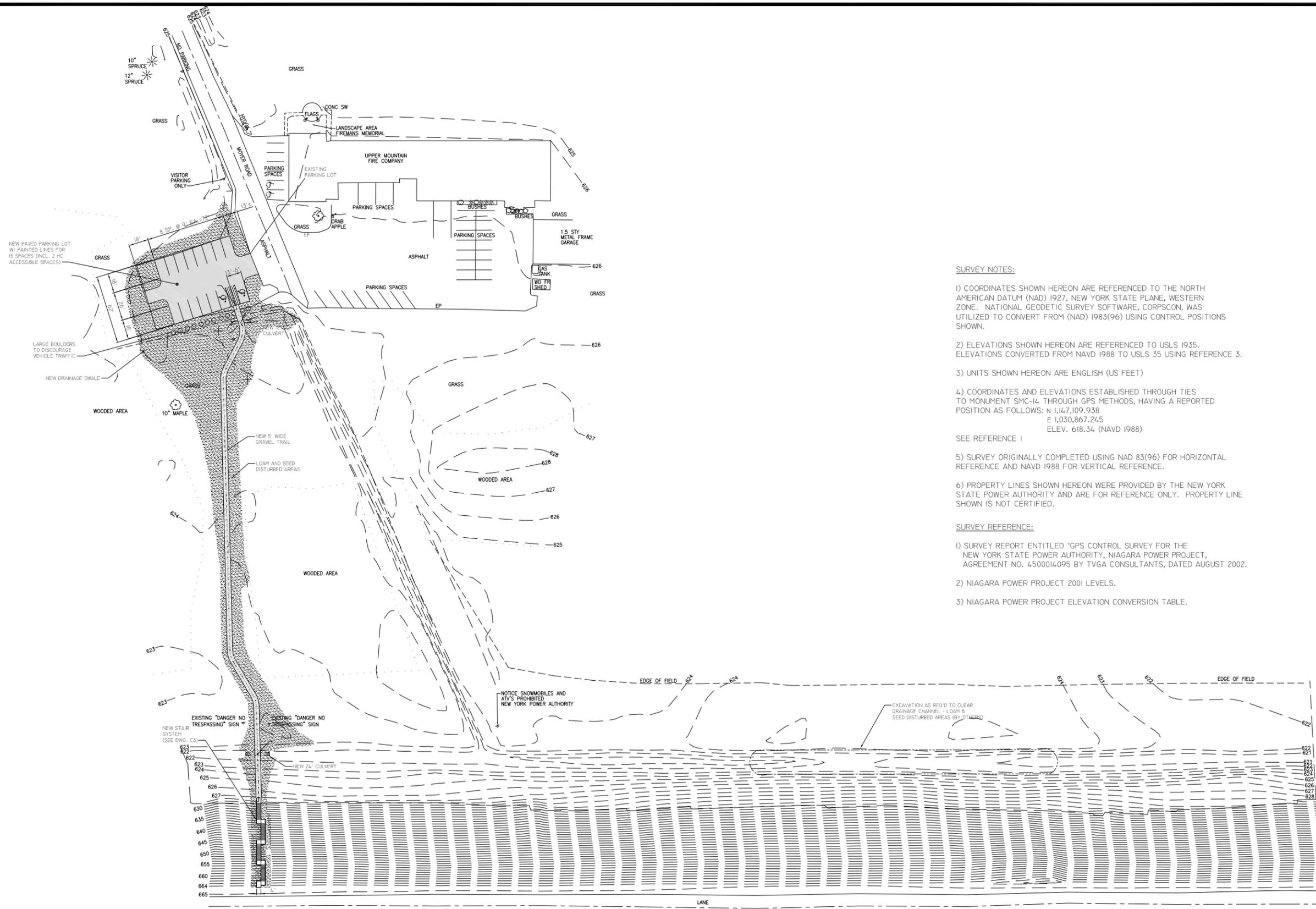
**FIGURE 5.1-5**  
**EROSION CONTROL & FENCING DETAILS**

PREPARED BY: E-PRO Engineering & Environmental Consulting  
SCALE: NOTED

DWG.NO: C3  
SHEET NO.:  
CONTRACT NO.

**New York Power Authority**

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**SURVEY NOTES:**

- 1) COORDINATES SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN DATUM (NAD) 1927, NEW YORK STATE PLANE, WESTERN ZONE. NATIONAL GEODETIC SURVEY SOFTWARE, CORPSCON, WAS UTILIZED TO CONVERT FROM (NAD) 1983(96) USING CONTROL POSITIONS SHOWN.
- 2) ELEVATIONS SHOWN HEREON ARE REFERENCED TO USLS 1935. ELEVATIONS CONVERTED FROM NAVD 1988 TO USLS 35 USING REFERENCE 3.
- 3) UNITS SHOWN HEREON ARE ENGLISH (US FEET)
- 4) COORDINATES AND ELEVATIONS ESTABLISHED THROUGH TIES TO MONUMENT SMC-14 THROUGH GPS METHODS, HAVING A REPORTED POSITION AS FOLLOWS: N 1,147,109.938 E 1,030,867.245 ELEV. 618.34 (NAVD 1988)
- 5) SURVEY ORIGINALLY COMPLETED USING NAD 83(96) FOR HORIZONTAL REFERENCE AND NAVD 1988 FOR VERTICAL REFERENCE.
- 6) PROPERTY LINES SHOWN HEREON WERE PROVIDED BY THE NEW YORK STATE POWER AUTHORITY AND ARE FOR REFERENCE ONLY. PROPERTY LINE SHOWN IS NOT CERTIFIED.

**SURVEY REFERENCE:**

- 1) SURVEY REPORT ENTITLED "GPS CONTROL SURVEY FOR THE NEW YORK STATE POWER AUTHORITY, NIAGARA POWER PROJECT, AGREEMENT NO. 4500014095 BY TVGA CONSULTANTS, DATED AUGUST 2002.
- 2) NIAGARA POWER PROJECT 2001 LEVELS.
- 3) NIAGARA POWER PROJECT ELEVATION CONVERSION TABLE.

**LEGEND**

- EP - EDGE OF PAVEMENT
- SW - SIDEWALK
- CP - CONTROL POINT
- ELEV - ELEVATION
- TG - TOP OF GRATE
- DS - DRAINAGE STRUCTURE
- |— SURVEY BASELINE
- EXISTING CONTOURS
- [Stippled] LOAM & SEED
- [Hatched] EDGE OF NEW PAVING
- [Dotted] LIMITS OF NEW GRAVEL TRAIL
- ⊕ SIGNAGE

ALL EXISTING INFORMATION SHOWN ON THIS PLAN IS AS TAKEN FROM A MAP BY FISHER ASSOCIATES, P.E., L.S., P.C., WHO CERTIFY THAT THIS MAP WAS PREPARED FROM THE NOTES OF AN INSTRUMENT SURVEY COMPLETED ON NOVEMBER 20, 2006, AND THE REFERENCES NOTED HEREON. TO THE BEST OF OUR KNOWLEDGE ALL INFORMATION SHOWN HEREON IS TRUE AND ACCURATE.

**OVERALL SITE PLAN**



NO.	DATE	DESCRIPTION	BY	CHECKED	APPROVED
D	08/31/07	ISSUED FOR RECREATION PLAN SUBMITTAL	JLB	JEP	
C	07/09/07	ISSUED FOR 50% NYPA REVIEW	JLB	JEP	
B	03/09/07	ISSUED FOR NYPA REVIEW	JLB	JEP	
A	02/22/07	ISSUED FOR INTERNAL REVIEW	JLB	JEP	

**RECREATION PLAN SUBMITTAL**

Engineering & Environmental Consulting, LLC  
249 Western Ave, Augusta, Maine 04330

CONTRACT DWG NO.: 12513-C1 PROJECT NO.: 12513

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Williamsville, NY 14221

**UPPER MOUNTAIN PARKING LOT & FISHING ACCESS IMPROVEMENTS**

**OVERALL SITE PLAN FIGURE 5.1-6**

PREPARED BY:  
E-PRO Engineering & Environmental Consulting

SCALE: NOTED

DWG.NO: C1  
SHEET NO.:  
CONTRACT NO.

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**SOIL EROSION AND SEDIMENT CONTROL NOTES**

- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ALL DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN THREE (3) WEEKS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
- PERMANENT VEGETATION TO BE SEED OR SODDED ON ALL EXPOSED AREAS IMMEDIATELY AFTER FINAL GRADING. MULCH TO BE USED AS NECESSARY FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
- ALL WORK TO BE DONE IN ACCORDANCE WITH THE NEW YORK, "GUIDELINES FOR URBAN EROSION & SEDIMENT CONTROL".
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OF ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
- SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
- ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAY WILL BE REMOVED IMMEDIATELY.
- STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD, SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE.
- ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #2.

**TOPSOILING SCHEDULE**

- TOPSOIL SHALL BE OF QUALITY WHICH WILL SUPPORT HEALTHY, VIGOROUS PLANT GROWTH. IT SHALL BE NATURAL, WORKABLE LOAM, FREE OF REFUSE, ROOTS, STONES, BRUSH, WEEDS OR OTHER MATERIAL THAT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANTS. RE-USE OF EXISTING STOCKPILED TOPSOIL IS ACCEPTABLE PROVIDED IT MEETS THIS CRITERION.
- THE PH RANGE TO BE 5.0 TO 7.5 SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMOLES PER CENTIMETER). OFFSITE TOPSOIL TO HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75% (IT MAY BE RAISED BY ADDITIVES, HUMUS, PEATMOSS, ETC.).
- PREPARE SITE TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AS PER PERMANENT OR TEMPORARY VEGETATIVE STANDARDS. TEST SUBSOIL FOR LIME REQUIREMENT AND RAISE PH LEVEL TO 6.5 AND WORK INTO SUBSOIL TO A DEPTH OF FOUR (4) INCHES.
- INSTALL REQUIRED EROSION CONTROL PRACTICES AND FACILITIES.
- SCARIFY SURFACE OF SOIL PRIOR TO APPLYING TOPSOIL. HANDLE TOPSOIL ONLY WHEN IT IS DRY ENOUGH TO PREVENT DAMAGING THE SOIL STRUCTURE.
- INSTALL AT A DEPTH OF FIVE (5) INCHES (UNSETTLED).

**TEMPORARY VEGETATIVE COVER STANDARDS**

- TO BE UTILIZED FOR SOILS EXPOSED FOR PERIODS OF THREE (3) WEEKS TO 12 MONTHS OR OTHERWISE NOTED.
- GRADE SITE AS REQUIRED TO PERMIT USE OF CONVENTIONAL EQUIPMENT TO PREPARE SEEDBED. INSTALL REQUIRED EROSION CONTROL PRACTICES OR FACILITIES PRIOR TO SEEDBED PREPARATION.
- APPLY LIMESTONE AND FERTILIZER PER SOIL TEST RESULTS. IN LIEU OF SOIL TESTS, THE FOLLOWING SHALL APPLY: FERTILIZERS, 5-10-5 AT A RATE OF 610 LBS/AC (14 LBS/1000 SF) OR EQUIVALENT.
- WORK LIMESTONE AND FERTILIZER INTO SOILS AT A DEPTH OF FOUR (4) INCHES WITH DISC SPRING - TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. FINAL WORK SHOULD FOLLOW THE GENERAL CONTOUR. TILL SOILS TO ACHIEVE UNIFORM SEEDBED.
- INSPECT SEEDBED BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA SHALL BE RETILLED.
- SEED WITH ANNUAL RYEGRASS AT A RATE OF 30 LB/AC (0.7 LB/1000 SF) AT A DEPTH OF 1/4 TO 1/2 INCH DURING MARCH 15 TO JUNE 1 AND AUGUST 15 TO SEPTEMBER 15 (NOTE: SUMMER SEEDING PERMITTED IF SOIL MOISTURE IS ADEQUATE OR IRRIGATION IS PROVIDED AND MULCHED WITH UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT A RATE OF 1 1/2 TO 2 TONS/AC (70 TO 90 LBS/1000 SF). UNIFORMLY SPREAD TO ACHIEVE 75% TO 90% COVERAGE.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). THE LATTER MAY BE JUSTIFIABLE FOR LARGE STEEP AREAS WHERE CONVENTIONAL VEHICLES MAY NOT TRAVEL.

**PERMANENT VEGETATIVE COVER STANDARDS**

- APPLY TOPSOIL PER TOPSOIL SCHEDULE.
- APPLY LIMESTONE AND FERTILIZER PER SOIL TEST RESULTS. IN LIEU OF SOIL TESTS, THE FOLLOWING SHALL APPLY: FERTILIZERS, 5-10-5 AT A RATE OF 610 LBS/AC (14 LBS/1000 SF) OR EQUIVALENT.
- WORK LIMESTONE AND FERTILIZER INTO SOILS AT A DEPT OF FOUR (4) INCHES WITH DISC SPRING-TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. FINAL WORK SHOULD FOLLOW THE GENERAL CONTOUR. TILL SOILS UNTIL A UNIFORM FINE SEEDBED IS ESTABLISHED. ROLL AND FIRM SEEDBED (EXCEPT CLAY, SILTY SOILS AND COARSE SANDS).
- REMOVE FROM SURFACE ALL STONES, DEBRIS LARGER THAN TWO (2) INCHES IN ANY DIMENSION PRIOR TO SEEDING.

- INSPECT SEEDBED. IF COMPACTED, RETILL AND FIRM AS REQUIRED.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER AT A DEPTH OF 1/4 TO 1/2 INCH. HYDROSEEDINGS WHICH ARE MULCHED NEED NOT BE WORKED INTO THE SOIL. SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATION WITH A ROLLER OR LIGHT DRAG (EXCEPT FOR CULTIPACKER TYPE SEEDER OR HYDROSEEDER). SEEDING TO FOLLOW GENERAL CONTOUR.

A. SEED MIXTURE:	VARIETY	RATE IN LBS/AC (LBS/1000 <sup>2</sup> FT)
CREeping RED FESCUE OR TALL FESCUE	ENSYLVA KY-31	20 (.5)
REDTOP OR PERENNIAL RYEGRASS AND BIRDSFOOT TREFLOIL	COMMON PENNIFINE EMPIRE	5 (.1) 0 (.2)

- SEEDING DATES: 3/15 TO 6/1, 6/15 TO 9/15

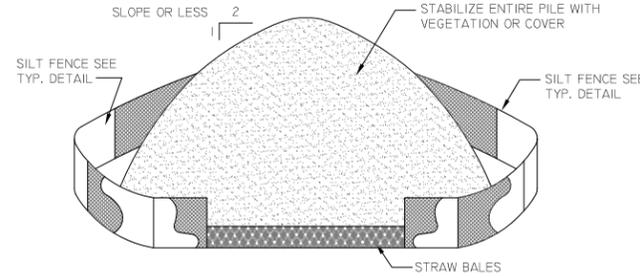
- IRRIGATE TO ACHIEVE SUFFICIENT SOIL MOISTURE A MINIMUM OF 1/2 INCH TWICE PER DAY UNTIL VEGETATION IS ESTABLISHED.
- MULCH WHENEVER SOIL MOISTURE IS SUFFICIENT, MULCH PER OUT OF SEASON STABILIZATION STANDARDS OR STABILIZATION WITH MULCH STANDARDS AS PER SOIL EROSION AND SEDIMENT CONTROL NOTES.

- TOPDRESSING: FERTILIZE 10-10-10 AT 400 LBS/AC (10 LBS/1000 SF) OR EQUIVALENT FOR FALL SEEDING TO BE DONE BETWEEN SEPTEMBER 1 TO OCTOBER 15. FOR SPRING SEEDING TO BE DONE BETWEEN MARCH 15 TO MAY 1. NOTE: MIXTURES DOMINATED BY LEGUMES OR WEEPING LOVEGRASS REQUIRE NO TOPDRESSING, BERMUDA GRASS TO BE TOPSEED BEFORE AUGUST 15.
- MULCHING: REQUIRED ON ALL AREAS TO BE SEED, AND SHALL APPLY TO ALL CONDITIONS.

- MULCH MATERIALS SHOULD BE UNROTTED SALT STRAW, CLEAN STRAW OR SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE OR 70 TO 90 LBS PER 1000 SF. MULCH BLOWERS SHOULD NOT GRIND OR CHOP THE MATERIAL.
- SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75% TO 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1000 SF SECTIONS AND DISTRIBUTE 70 TO 90 LBS WITHIN EACH SECTION.
- MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SITE OF THE AREA, STEEPNESS OF SLOPES AND COSTS.
  - PEG AND TWINE-DRIVE 6 TO 10 WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY FOUR (4) FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
  - MULCH NETTINGS-STAPLE PAPER, JUTE, COTTON OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE DEGRADABLE NETTING IN AREAS TO BE MOWED.
  - MULCH ANCHORING TOOL-A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR STRAW MULCHES INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. TOOL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. THE OPERATION SHOULD BE DONE ON THE CONTOUR.

**STABILIZATION WITH MULCH STANDARD**

- EXPOSED SOILS NOT SUBJECT TO CONSTRUCTION AND BEYOND RECOMMENDED SEEDING DATES OR VEGETATION COVER REQUIRING MULCH COVER FOR DROUGHTY SITES SHALL BE MULCHED (INCLUDING AS A TEMPORARY MEASURE UNTIL A MORE SUITABLE PROTECTION IS DEVELOPED).
- GRADE AS REQUIRED TO PERMIT USE OF CONVENTIONAL EQUIPMENT FOR APPLYING AND ANCHORING MULCH. IF REQUIRED AS A COVER FOR PERMANENT VEGETATION PREPARATION SHALL CONFORM TO PERMANENT VEGETATIVE STANDARDS.
- INSTALL REQUIRED EROSION CONTROL PRACTICES AND FACILITIES PRIOR TO MULCH APPLICATION.
- SITE REQUIRING TEMPORARY COVER OR UNTIL A MORE SUITABLE PROTECTION IS DEVELOPED, MULCH WITH UNROTTED SALT HAY, CLEAN HAY OR SMALL GRAIN STRAW AT A RATE OF 1 1/2 TO 2 TONS/AC (70 TO 90 LBS/1000 SF). SPREAD UNIFORMLY TO ACHIEVE 75% TO 90% SOIL COVERAGE. SITES REQUIRING OUT OF SEASON STABILIZATION, MULCH AS ABOVE AT A RATE OF 2 TO 2 1/2 TONS/AC (90-115 LBS 1000 SF) AND ANCHOR MULCH WITH MULCH ANCHORING TOOL, LIQUID BINDERS OR NETTING TIEDOWNS.
- MULCH ANCHORING METHODS TO BE EMPLOYED IMMEDIATELY AFTER PLACEMENT OF MULCH OR STRAW. IT MAY CONSIST OF THE FOLLOWING:
  - PEG AND TWINE-DRIVE 6 TO 10 WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY FOUR (4) FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER MULCHING. STRETCH TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERNS. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
  - MULCH NETTINGS STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS OVER STRAW MULCH NETTING TO BE JUTE MESH OR APPROVED EQUAL.

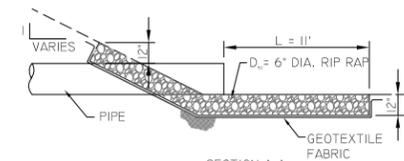
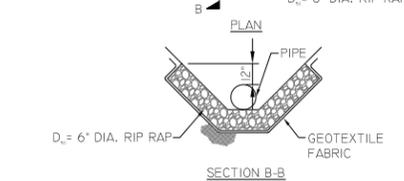
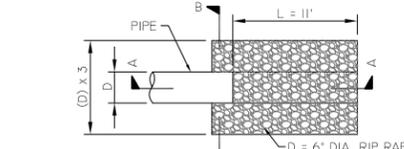


**INSTALLATION NOTES:**

- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
- MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
- UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

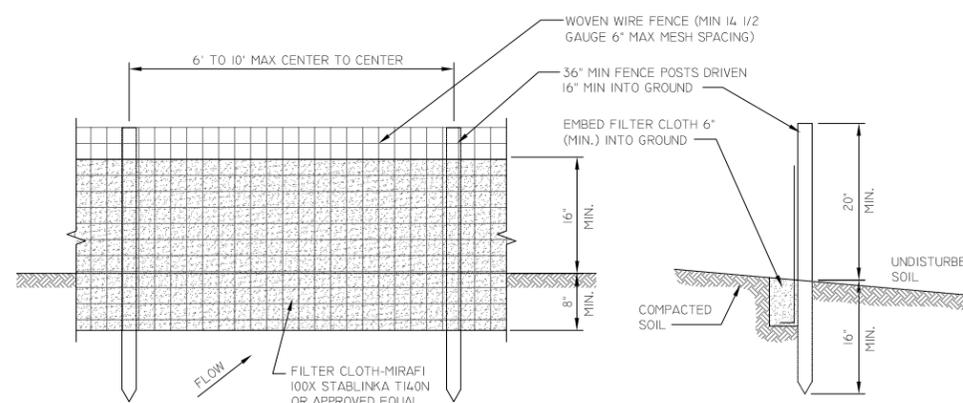
**TYPICAL TOPSOIL STOCKPILE**

SCALE: 1/4"=1'-0"



**RIPRAP APRON**

SCALE: 1/4"=1'-0"



**ELEVATION**

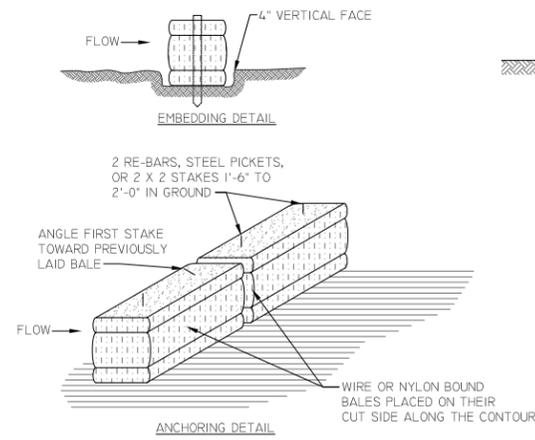
- WOVEN WIRE FENCE TO BE FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDSECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.

**SECTION**

- |                     |  |
|---------------------|--|
| POSTS:              | STEEL "I" OR "U" TYPE OR 2" HARDWOOD.                      |
| FENCE:              | WOVEN WIRE, 14 1/2 GA 6" MAX MESH OPENING.                 |
| FILTER CLOTH:       | FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL. |
| PREFABRICATED UNIT: | ENVIROFENCE OR APPROVED EQUAL.                             |

**SILT FENCE DETAILS**

SCALE: 1/2"=1'-0"



**STRAW BALE BARRIER DETAIL**

SCALE: 1/4"=1'-0"

JLB				
JEP				
DWN	DWN	DWN	PROJ	
CHK	CHK	CHK	APP.	

**RECREATION PLAN SUBMITTAL**

**REVISIONS**

REV NO	DATE	DESCRIPTION
A	11/05/07	ISSUED FOR RECREATION PLAN SUBMITTAL



Engineering & Environmental Consulting, LLC  
249 Western Ave, Augusta, Maine 04330

CONTRACT DWG NO.: 12513-C4 PROJECT NO.: 12513

**Gomez and Sullivan Engineers, P.C.**

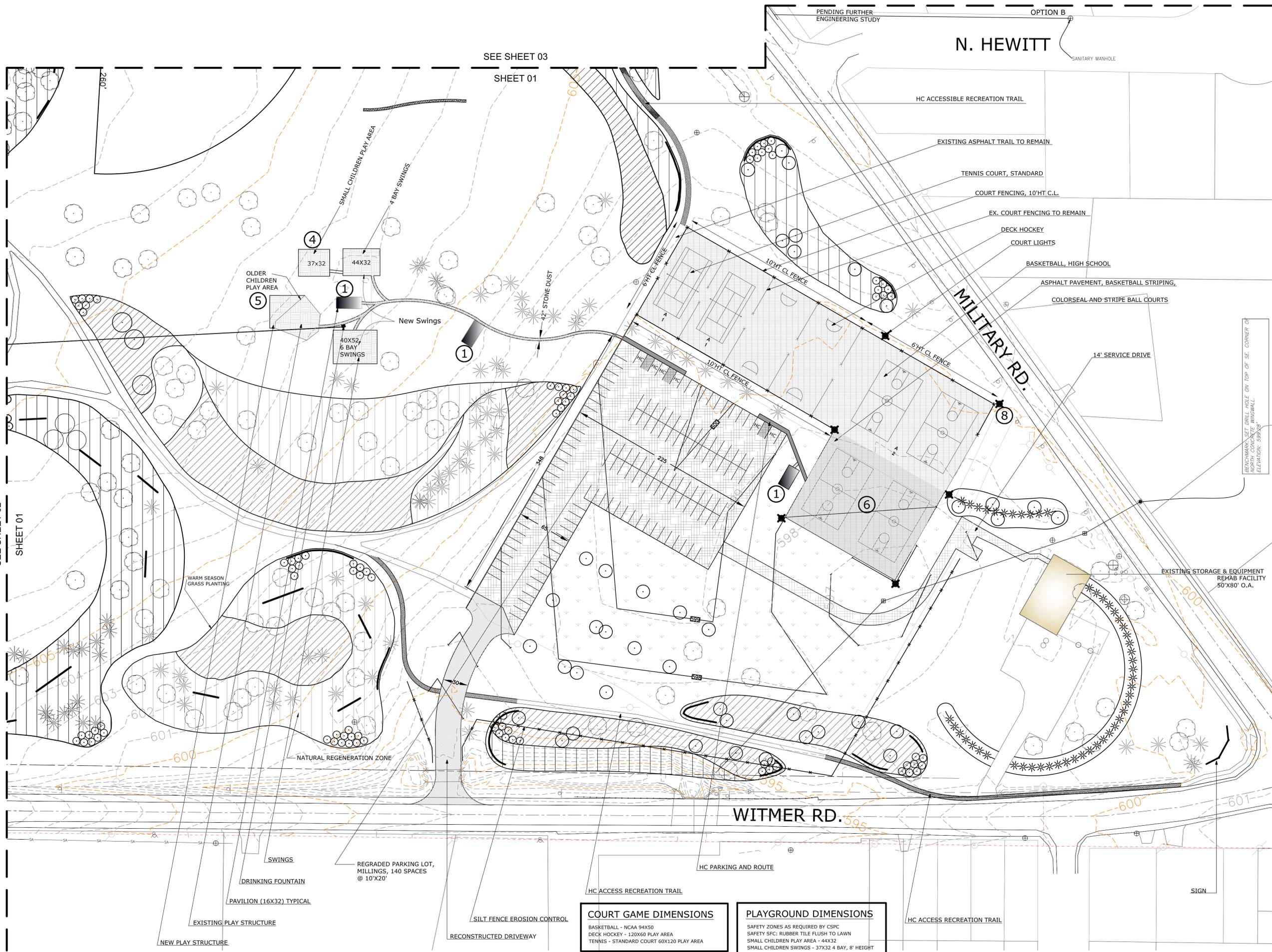
Engineers and Environmental Scientists  
Utica, NY 13502 Williamsville, NY 14221 Weare, NH 03281

**UPPER MOUNTAIN PARKING LOT & FISHING ACCESS IMPROVEMENTS**

**FIGURE 5.1-7 EROSION CONTROL NOTES & DETAILS**

PREPARED BY: E-PRO Engineering & Environmental Consulting	DWG.NO: C3 SHEET NO.:
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SEE SHEET 02  
SHEET 01

SEE SHEET 03  
SHEET 01

PENDING FURTHER  
ENGINEERING STUDY

N. HEWITT

OPTION B

SANITARY MANHOLE

HC ACCESSIBLE RECREATION TRAIL

EXISTING ASPHALT TRAIL TO REMAIN

TENNIS COURT, STANDARD

COURT FENCING, 10'HT C.L.

EX. COURT FENCING TO REMAIN

DECK HOCKEY  
COURT LIGHTS

BASKETBALL, HIGH SCHOOL

ASPHALT PAVEMENT, BASKETBALL STRIPING,

COLORSEAL AND STRIPE BALL COURTS

14' SERVICE DRIVE

MILITARY RD.

BENCHMARK SET DRILL HOLE ON TOP OF SE. CORNER OF  
PIVOTAL  
ELEVATION: 593.28'

EXISTING STORAGE & EQUIPMENT  
REHAB FACILITY  
50'X80' O.A.

WITMER RD.

SWINGS  
DRINKING FOUNTAIN

REGRADED PARKING LOT,  
MILLINGS, 140 SPACES  
@ 10'X20'

HC ACCESS RECREATION TRAIL

HC PARKING AND ROUTE

SIGN

PAVILION (16X32) TYPICAL

NEW PLAY STRUCTURE

EXISTING PLAY STRUCTURE

RECONSTRUCTED DRIVEWAY

SILT FENCE EROSION CONTROL

**COURT GAME DIMENSIONS**

BASKETBALL - NCAA 94X50  
DECK HOCKEY - 120X60 PLAY AREA  
TENNIS - STANDARD COURT 60X120 PLAY AREA

**PLAYGROUND DIMENSIONS**

SAFETY ZONES AS REQUIRED BY CSCP  
SAFETY SFC: RUBBER TILE FLUSH TO LAWN  
SMALL CHILDREN PLAY AREA - 44X32  
SMALL CHILDREN SWINGS - 37X32 4 BAY, 8' HEIGHT  
OLDER CHILDREN SWINGS - 40X52 6 BAY, 10' HEIGHT  
EXISTING OLDER CHILDRENS PLAY SET



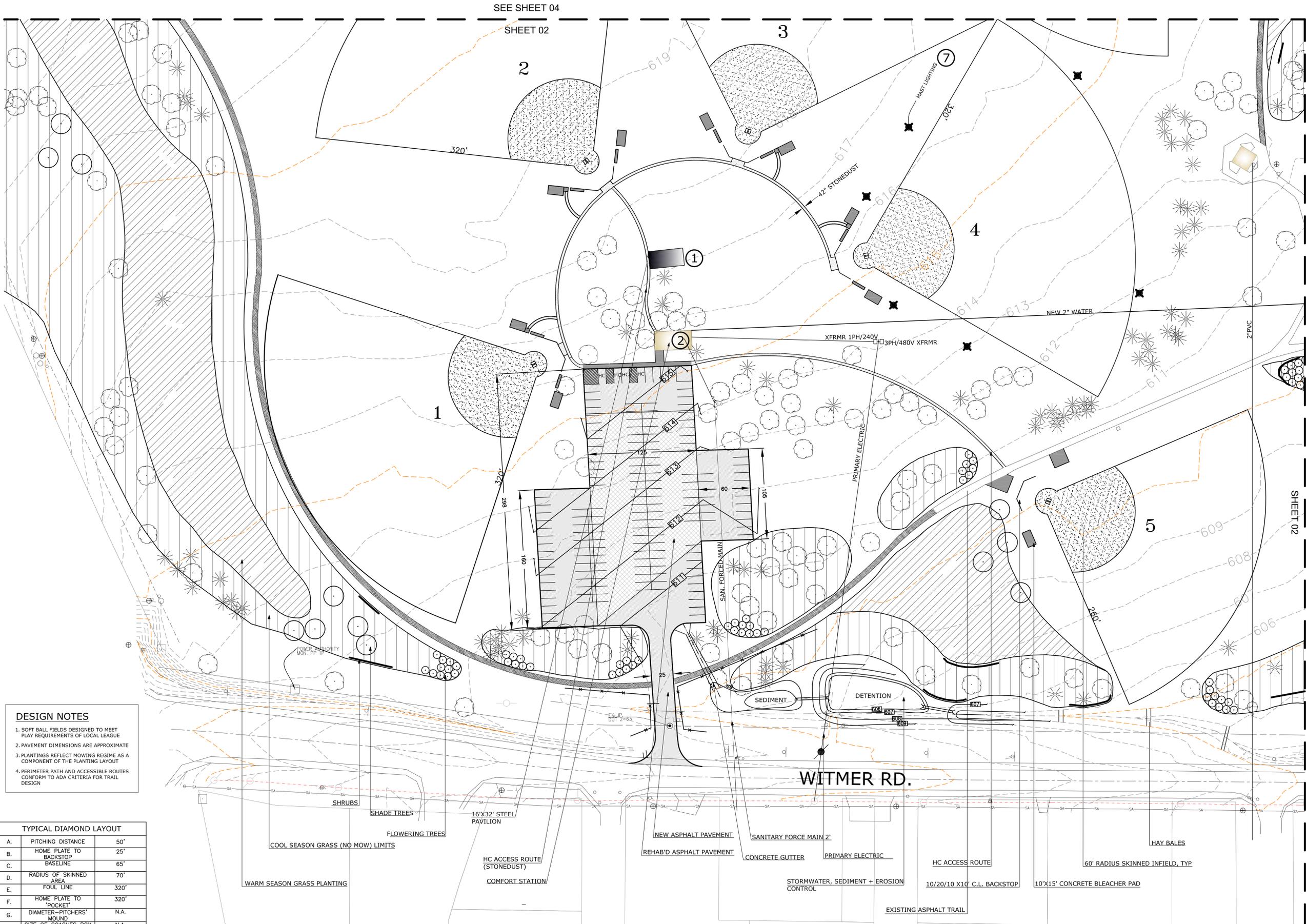
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SHEET 02

SEE SHEET 01  
SHEET 02

**DESIGN NOTES**

- SOFT BALL FIELDS DESIGNED TO MEET PLAY REQUIREMENTS OF LOCAL LEAGUE
- PAVEMENT DIMENSIONS ARE APPROXIMATE
- PLANTINGS REFLECT MOWING REGIME AS A COMPONENT OF THE PLANTING LAYOUT
- PERIMETER PATH AND ACCESSIBLE ROUTES CONFORM TO ADA CRITERIA FOR TRAIL DESIGN

TYPICAL DIAMOND LAYOUT		
A.	PITCHING DISTANCE	50'
B.	HOME PLATE TO BACKSTOP BASELINE	25'
C.	RADIUS OF SKINNED AREA	65'
D.	FOUL LINE	70'
E.	HOME PLATE TO "POCKET"	320'
F.	DIAMETER-PITCHERS' MOUND	N.A.
G.	SIZE OF COACHES' BOX	N.A.
H.	BASELINE TO TURF	3'
I.	BACKSTOP	10', 20', 10' / 10' HT



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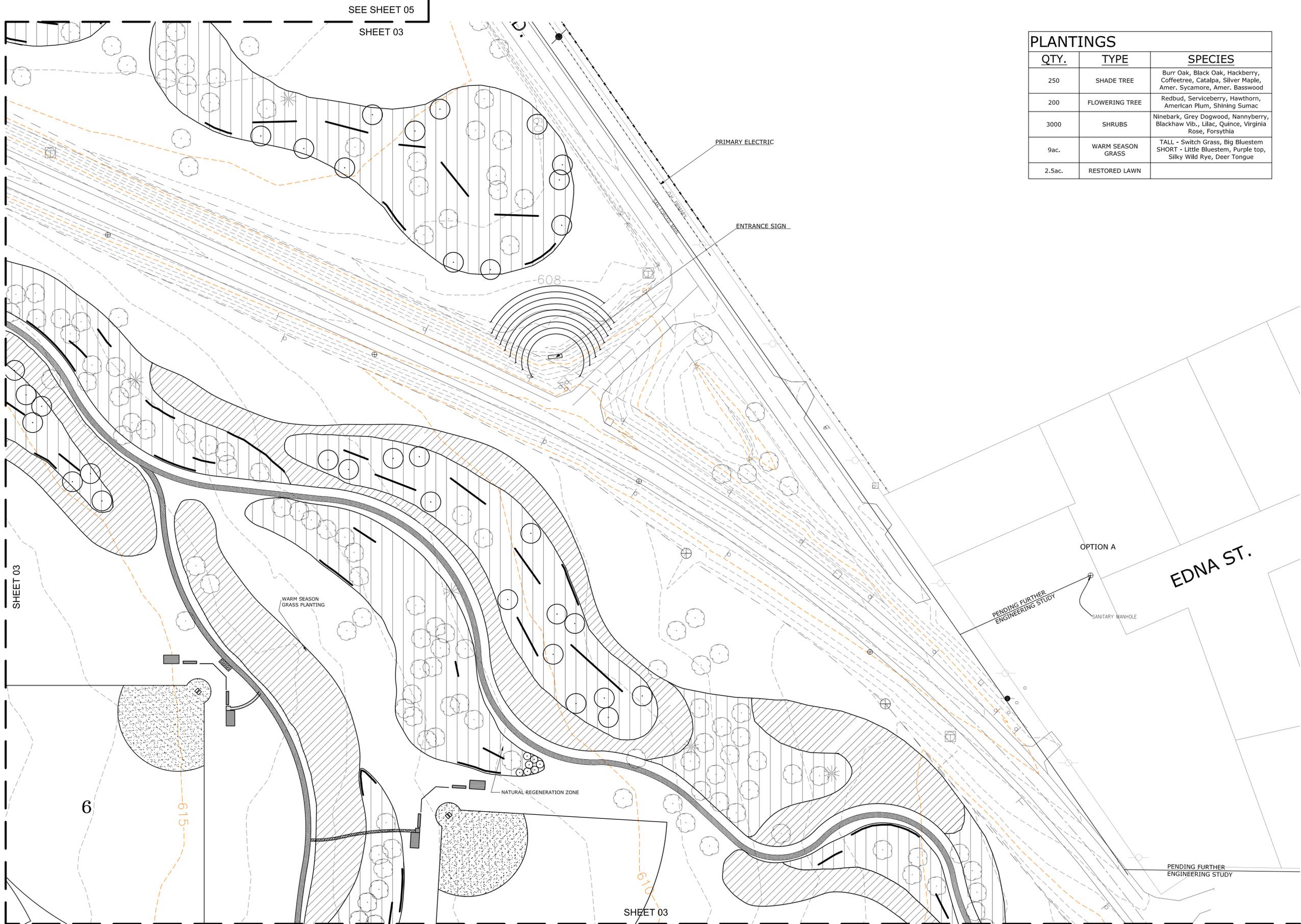
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PLANTINGS		
QTY.	TYPE	SPECIES
250	SHADE TREE	Burr Oak, Black Oak, Hackberry, Coffeetree, Catalpa, Silver Maple, Amer. Sycamore, Amer. Basswood
200	FLOWERING TREE	Redbud, Serviceberry, Hawthorn, American Plum, Shining Sumac
3000	SHRUBS	Ninebark, Grey Dogwood, Nannyberry, Blackhaw Vib., Lilac, Quince, Virginia Rose, Forsythia
9ac.	WARM SEASON GRASS	TALL - Switch Grass, Big Bluestem SHORT - Little Bluestem, Purple top, Silky Wild Rye, Deer Tongue
2.5ac.	RESTORED LAWN	

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SEE SHEET 05  
SHEET 04

SEE SHEET 03  
SHEET 04

SHEET 04  
SEE SHEET 02

MODEL AIRPLANE FLYING AREA

MODEL AIRPLANE FLYING FIELD



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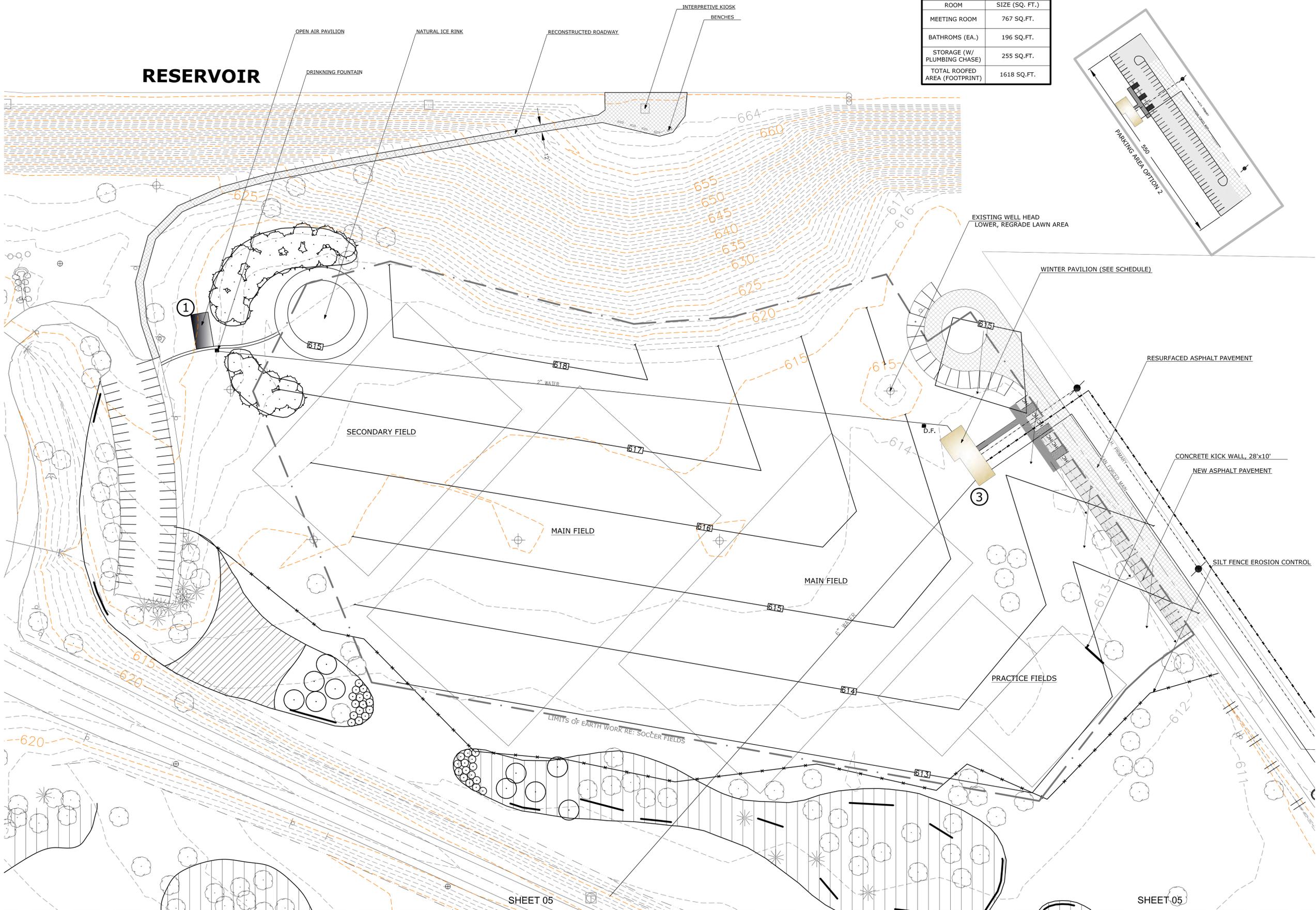
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**SITE PLAN**

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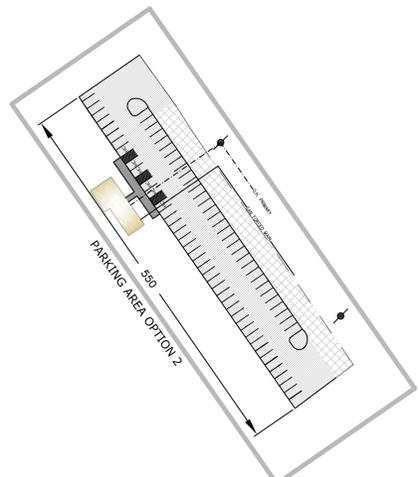
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# RESERVOIR



WINTER PAVILION ROOM SCHEDULE	
ROOM	SIZE (SQ. FT.)
MEETING ROOM	767 SQ. FT.
BATHROOMS (EA.)	196 SQ. FT.
STORAGE (W/ PLUMBING CHASE)	255 SQ. FT.
TOTAL ROOFED AREA (FOOTPRINT)	1618 SQ. FT.



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# RESERVOIR STATE PARK SITE PLAN

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NIAGARA POWER PROJECT FERC NO. 2216

# RECREATIONAL ENHANCEMENT PROJECTS

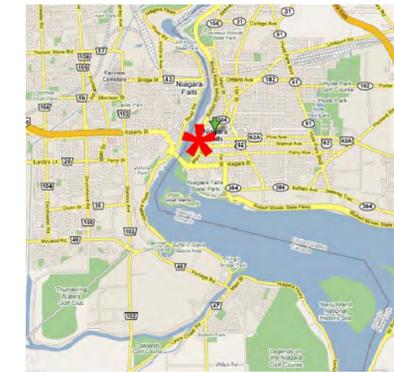
50% CONCEPT DESIGN SUBMITTAL

NIAGARA RIVER GORGE TRAIL IMPROVEMENTS

**Trowbridge & Wolf, LLP**  
 Landscape Architects & Planners  
 1001 West Seneca Street  
 Suite 101  
 Ithaca, NY 14850  
 (607) 277-1400  
 (607) 277-6092 fax

**Niagara Reservation State Park**  
 Niagara Falls, New York 14303  
 (716) 278-1770  
 (716) 278-1718 fax

## VICINITY MAP



**TWLA**  
**TROWBRIDGE & WOLF**  
 LANDSCAPE ARCHITECTS

1001 W. Seneca St., Ste. 101 Ithaca, New York 14850  
 607-277-1400 Fax 607-277-6092

**ERDMAN ANTHONY**  
 CONSULTING ENGINEERS

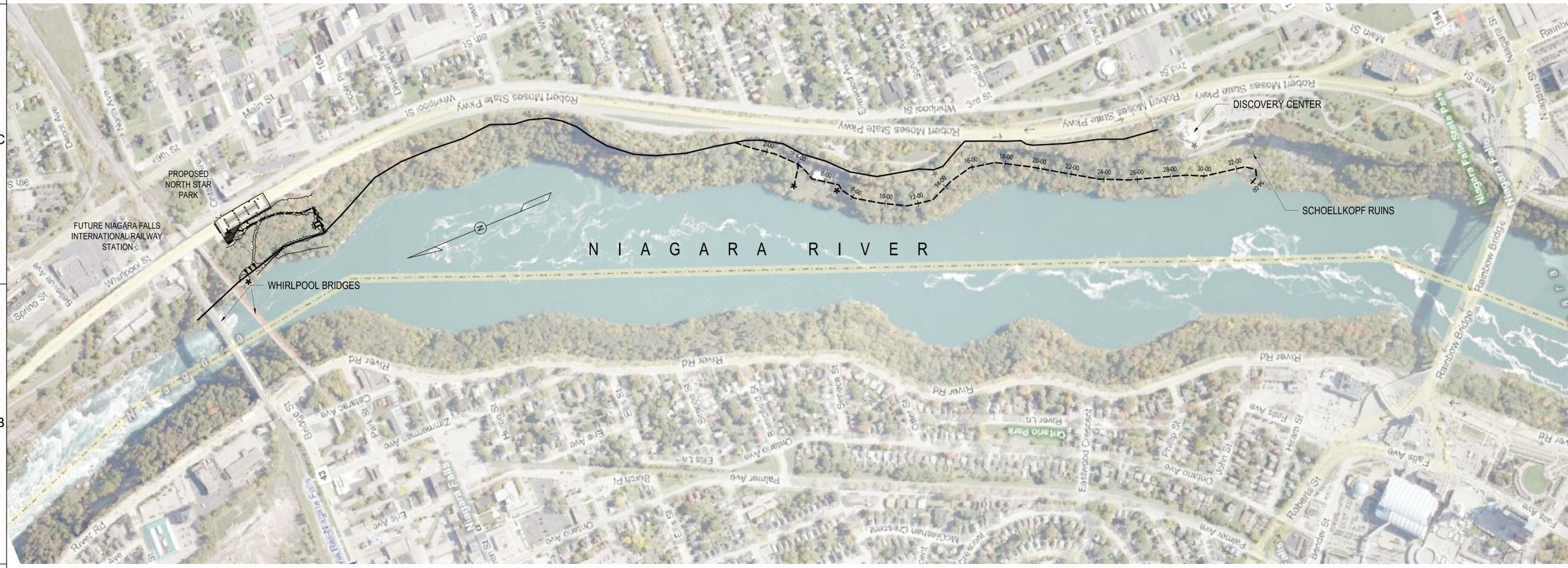
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NEW YORK STATE  
 NIAGARA REGION

STATE OF NEW YORK · EXECUTIVE DEPARTMENT  
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 WESTERN DISTRICT - NIAGARA REGION  
 NIAGARA RESERVATION STATE PARK  
 NIAGARA FALLS, NEW YORK 14303-0132  
 (716) 278-1770 FAX: (716) 278-1716

NIAGARA RIVER GORGE  
 TRAIL IMPROVEMENTS  
 50% CONCEPT DESIGN



LEGEND	
	EXISTING TRAIL
	PROPOSED TRAIL IMPROVEMENTS
	TRAIL OVERLOOK (PROPOSED)
	TRAIL OVERLOOK (EXISTING)
	STATION MARK

DRAWING LIST	
L101	TRAIL PLAN OVERVIEW
L102	SCHOELLKOPF TRAIL
L103	WHIRLPOOL BRIDGE TRAIL
L104	WHIRLPOOL BRIDGE TRAIL (SHEET 2)
L105	DETAILS

GENERAL PROJECTS NOTES	
1.	ACCURATE SURVEY INFORMATION FOR THE ENTIRE LENGTH OF TRAIL WAS NOT AVAILABLE. THEREFORE ALL STATION LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED PRIOR TO FINAL DESIGN AND CONSTRUCTION DOCUMENTS ARE PREPARED.

DATE:	DECEMBER 28, 2007
PROJECT:	TWLA6043
DRAWN BY:	NCD
CHECKED BY:	KAW

KEY PLAN

**L101**

File: T:\Project\Term Contract\Erman Anthony\ACAD\T\WLA6043\Discovery\Whirlpool Trails.dwg Plot Date: 12/28/2007



D1 ERODED OUTLAW TRAIL  
NTS



D2 INTERSECTION OF UPPER AND LOWER TRAILS  
NTS



D4 EXISTING PHOTO AT SEWAGE PUMP STATION  
NTS



D5 EXISTING PHOTO ALONG TRAIL  
NTS



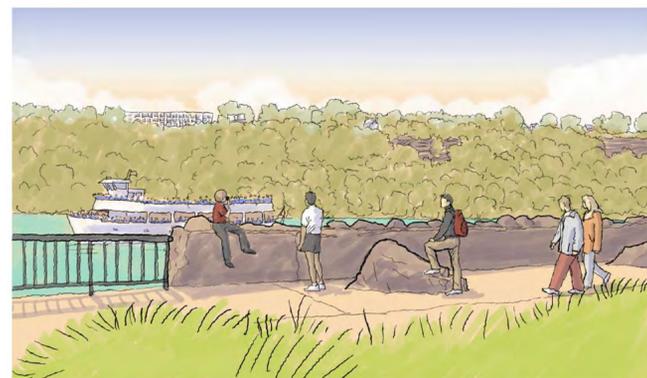
D6 GRAVEL SLIDE AREA  
NTS



B1 LOWER WALL AT SCHOELLKOPF RUINS  
NTS



A1 VIEW LOOKING TO UPPER SCHOELLKOPF OVERLOOK  
NTS



A2 OVERLOOK AT SCHOELLKOPF RUINS  
NTS



C5 STONE SLIDE AREA  
NTS

**TWLA**  
TROWBRIDGE  
& WOLF  
LANDSCAPE ARCHITECTS

1001 W. Seneca St., Ste. 101  
Rochester, NY 14607  
607-271-1400

ERDMAN ANTHONY  
CONSULTING ENGINEERS  
Rochester, NY - Buffalo, NY - Westfield, NY - Tonawanda, NY - Buffalo, NY - Albany, NY

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NIAGARA RIVER GORGE  
TRAIL IMPROVEMENTS  
50% CONCEPT DESIGN

DATE:	DECEMBER 28, 2007
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DRAWN BY:	NCD
CHECKED BY:	KAW

AERIAL @ SCHOELLKOPF RUINS

L102

File: T:\Project\Term Contract\Erman Anthony\ACAD\T\WLA6043 Discover\Whitford Trails.dwg Plot Date: 12/29/2007



D1 EXISTING PHOTO AT PROPOSED TRAILHEAD AT UPPER PARKING LOT @ WHIRLPOOL STREET  
NTS



D1 EXISTING PHOTO AT BRIDGE ABUTMENT REMNANT @ PROPOSED TRAILHEAD  
NTS



A3 PERSPECTIVE VIEW AT PROPOSED TRAILHEAD AT UPPER PARKING LOT @ WHIRLPOOL STREET  
NTS



A1 PERSPECTIVE VIEW OF PROPOSED IMPROVEMENTS AT WHIRLPOOL BRIDGE OVERLOOK  
NTS



D4 EXISTING WALL AT PROPOSED WHIRLPOOL BRIDGE OVERLOOK (NORTH END)  
NTS



D5 EXISTING WALL AT PROPOSED WHIRLPOOL BRIDGE OVERLOOK (SOUTH END)  
NTS

DATE:	DECEMBER 28, 2007
PROJECT:	TWLA6043
DRAWN BY:	NCD
CHECKED BY:	KAW

File: T:\Project\Term Contract w Erdman Anthony\ACAD\T\TWLA6043 Discover\Whirlpool Trail.dwg Plot Date: 12/28/2007



**NIAGARA RIVER GORGE**  
**TRAIL IMPROVEMENTS**  
**50% CONCEPT DESIGN**

DATE:	DECEMBER 28, 2007
PROJECT:	TWLA6043
DRAWN BY:	NCD
CHECKED BY:	KAW

WHIRLPOOL PLAN - SHEET 2

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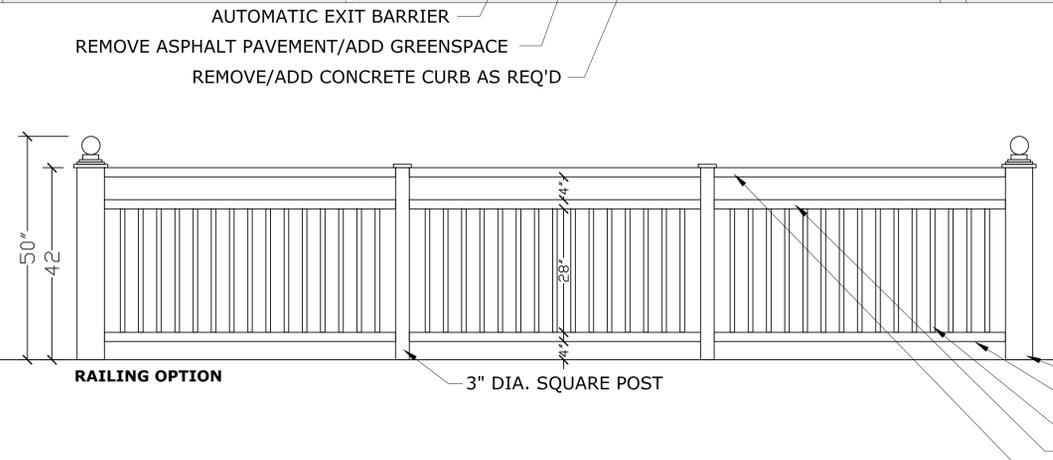
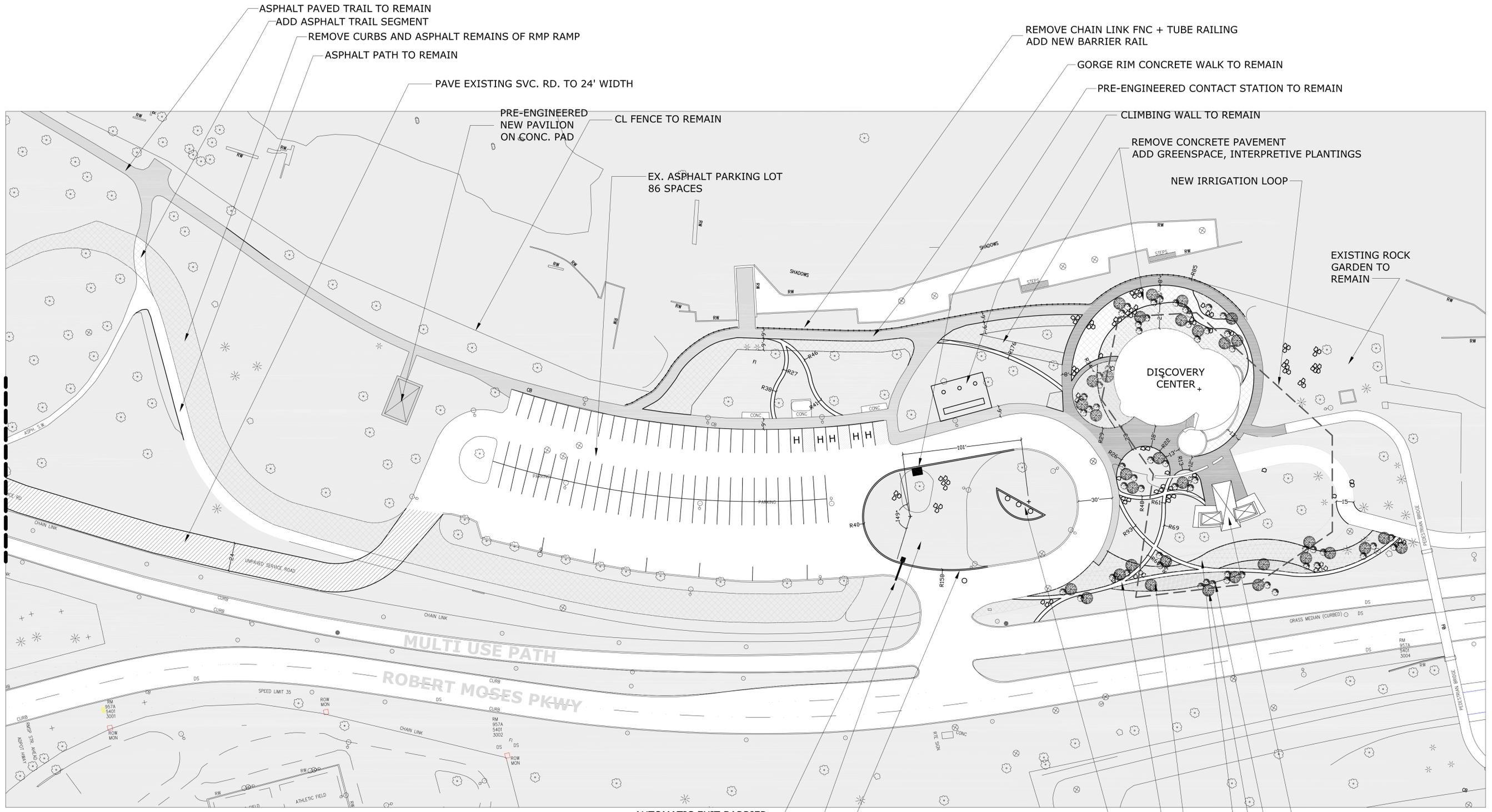
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WARNING:  
 ANY ALTERATIONS TO THIS DOCUMENT NOT  
 CONFORMING TO SECTION 7209,  
 SUBDIVISION 2, NEW YORK STATE EDUCATION  
 LAW, ARE STRICTLY PROHIBITED.

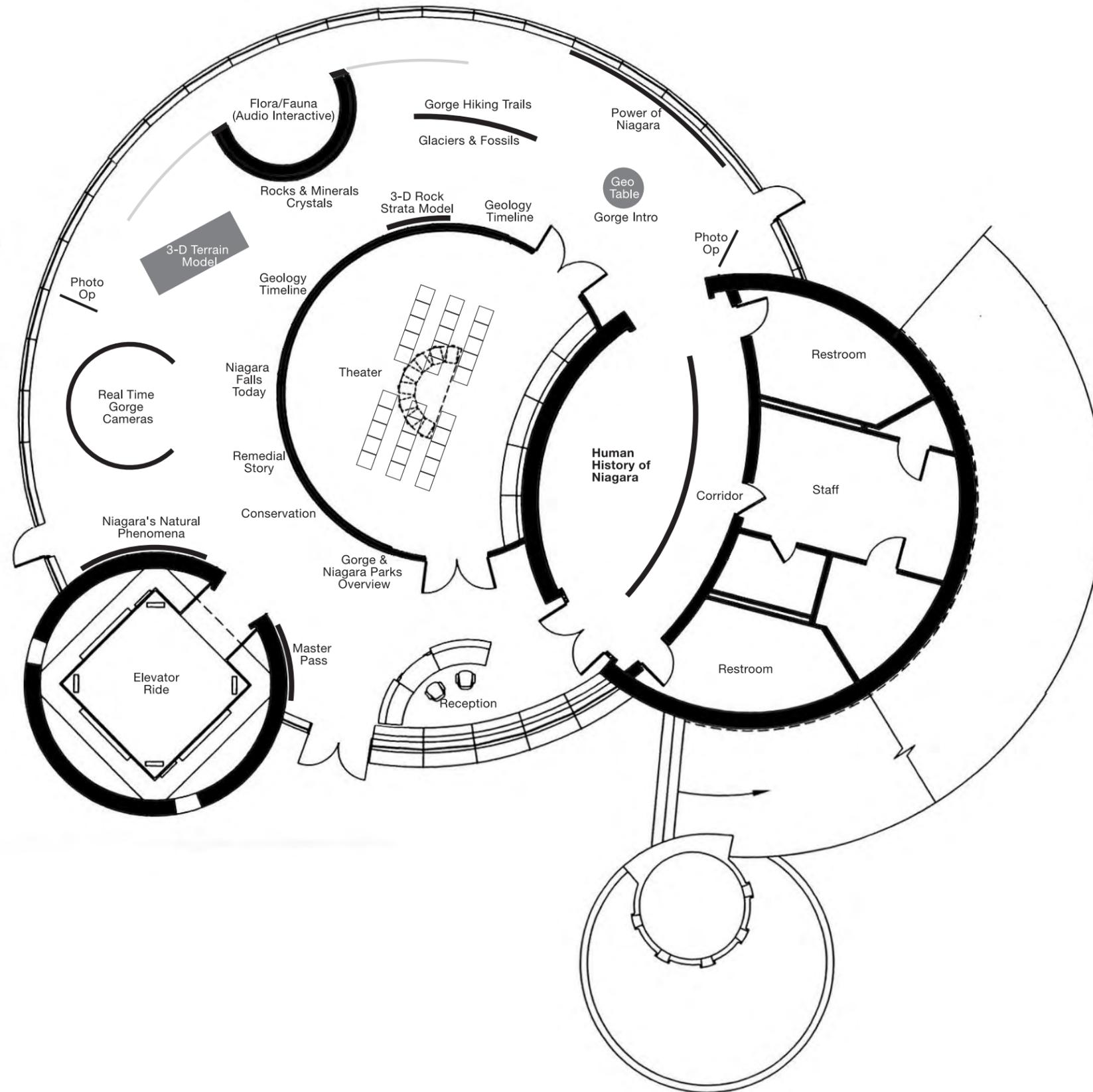
**SCHOELLKOPF OVERLOOK**

**CONCEPTUAL DESIGN**

DESIGNED		
DRAWN		
CHECKED		
SCALE	1"=40'	
DATE	NO.	DATE
	REVISIONS	
SHEET NO.		
FILE NO.		



- TRAILHEAD COMFORT STATION
- NATIVE DOGWOOD
- GREY BIRCH
- NATIVE GRASSES
- WILDFLOWERS
- STONE DUST TRAIL, DOLOMITE BOULDERS
- FLAG POLES/ENTRANCE SIGN, ORNAMENTAL LANDSCAPE TO REMAIN
- 6" DIAMETER SQUARE FLUTED POST W/4" DIA BALL
- 2" DIAMETER BOTTOM RAIL
- 1" DIA. PICKET, 4" O.C.
- 2" DIA. MID RAIL



**Niagara Gorge  
Discovery Center  
Exhibit Upgrades**

Proposed  
Floor Plan

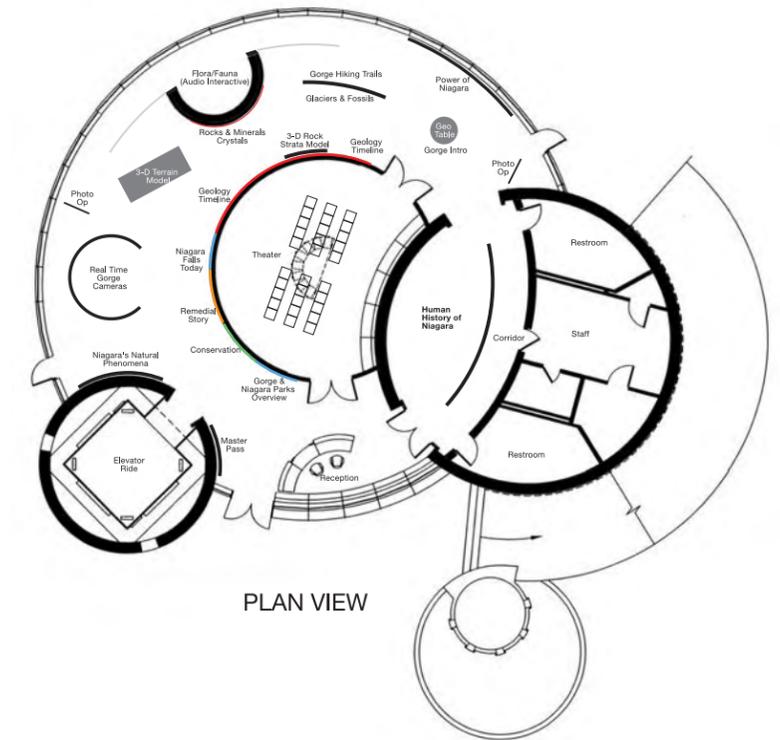
Simplified Graphic Treatment Presents Information in a Concise, Universal Format



Three-dimensional Solid Terrain Model of Niagara Gorge Stratification

Interactive Geo-Tilty Table Reinforces Niagara Region Geology

Hands-on Interactive Elements Allow Visitor Participation



**Niagara Gorge Discovery Center Exhibit Upgrades**

Interior View:  
Proposed Exhibits

**NIAGARA POWER PROJECT (FERC NO. 2216)  
RECREATION PLAN**

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**6.0 IMPLEMENTATION SCHEDULE AND ESTIMATED COSTS**

This section addresses completion schedules for each of the projects described in [Section 5.0](#). It will also address who will be responsible for the installations/enhancements, as well as funding and cost estimates in 2007 dollars. The Power Authority is responsible for all project recreation facilities, however some of the facilities are operated and maintained by other entities. The first four projects will take place at the Power Authority operated project recreation facilities, which include the Robert Moses Fishing Pier, the Upper Niagara River Observation Area, the Upper Mountain Parking lot and Fishing Access, and the Power Vista. It is estimated that completion of proposed work at these facilities will cost a total of \$1,506,000.00 (NPV 2007). The Power Authority will contract and fund the enhancements and installations listed in [Table 5](#).

<b>TABLE 5: IMPLEMENTATION SCHEDULE AND ESTIMATED COST FOR IMPROVEMENTS TO POWER AUTHORITY OPERATED FACILITIES</b>		
<b>Recreation Facility</b>	<b>Completion Schedule</b>	<b>Estimated Cost (NPV 2007)</b>
Robert Moses Fishing Pier	2009	\$78,000.00
Upper Niagara River Observation Area	2009	\$989,000.00
Upper Mountain Parking Lot and Fishing Access	2009	\$289,000.00
Haudenosaunee Exhibit	Currently under consultation	Up to \$150,000.00

The remaining facilities (Reservoir State Park, Niagara Gorge Discovery Center, Great Gorge Railroad Trail) are NYSOPRHP-operated facilities and improvements to these facilities will be funded partially through the \$9.2 million (2007 NPV) Parks and Recreation Fund established by the Power Authority. NYSOPRHP will provide funding for those improvements that exceed the monies provided in the Parks and Recreation Fund. [Table 6](#) lists the facilities, the completion schedule and estimated cost of the project.

**NIAGARA POWER PROJECT (FERC NO. 2216)  
RECREATION PLAN**

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<b>TABLE 6: IMPLEMENTATION SCHEDULE AND ESTIMATED COST FOR IMPROVEMENTS TO NYSOPRHP OPERATED FACILITIES</b>		
<b>Recreation Facility</b>	<b>Completion Schedule</b>	<b>Estimated Cost (NPV 2007)</b>
Reservoir State Park	2009-2010	\$3,600,000.00
Great Gorge Railroad Trail	2009-2010	\$1,200,000.00
Niagara Gorge Discovery Center	2009-2010	\$700,000.00

**NIAGARA POWER PROJECT (FERC NO. 2216)  
RECREATION PLAN**

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**7.0 OPERATION AND MAINTENANCE**

The Power Authority is responsible for all project recreation facilities; however the majority of the facilities are operated and maintained by other entities. The parties who operate and maintain facilities are listed in [Table 7](#) below. The Power Authority expects that each recreation site will continue to be operated and maintained by the entities now performing those functions.

The Power Authority has an operating and maintenance agreement with the NYSOPRHP for Reservoir State Park. The agreement was signed in 1964 and gives OPRHP the right and privilege to operate and maintain, for State park purposes, the land and facilities comprising Reservoir State Park.

The Power Authority and the NYSOPRHP, in May of 2002 signed the Niagara Gorge Discovery Center Agreement. This agreement grants the NYSOPRHP the right to possess, use, maintain, control, manage, govern, and provide police and security protection for State Park purposes for the Niagara Gorge Discovery Center and trails located on the Great Gorge Railroad right of way for 25 years. As part of this agreement, the NYSOPRHP assumes full responsibility for operations and maintenance of the Niagara Gorge Discovery Center and the trails.

<b>TABLE 7: ENTITIES RESPONSIBLE FOR OPERATIONS AND MAINTENANCE OF PROJECT RECREATION FACILITIES</b>				
<b>Recreation Facility</b>	<b>Entity Responsible for Operation and Maintenance of Facility</b>			
	<b>Power Authority</b>	<b>NYSOPRHP</b>	<b>City of Niagara Falls</b>	<b>NYSDOT</b>
Upper River Trail	X		X	
Upper Niagara River Observation Area	X			
Niagara Gorge Discovery Center		X		
Niagara Power Project Visitor Center	X			
Lewiston Reservoir Fishing Access	X	X		
Reservoir State Park		X		
Great Gorge Railroad Trail		X		
Robert Moses Parkway		X		X
Robert Moses Fishing Pier	X			
Upper Mountain Access	X			

**NIAGARA POWER PROJECT (FERC NO. 2216)  
RECREATION PLAN**

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**8.0 FUTURE RECREATIONAL NEEDS AT THE NIAGARA PROJECT**

**8.1 Methodology**

The Recreation Plan will be evaluated every twelve years to ensure flexibility and provide for the changing needs of the recreating public. This evaluation will coincide with every other FERC Form 80 Licensed Hydropower Development Recreation Report (Form 80) submittal year, (Form 80 is filed with FERC every six years). The first evaluation will begin upon the completion of the second Form 80 submittal, after the issuance of the project license, and should continue to occur every twelfth year there after.

The methodology used will be built upon three elements. The approach should utilize:

- (a) Use estimation – conducting Form 80 evaluations and recreation facility capacity investigations;
- (b) Needs Consultation – discussions to determine potential future recreation needs with consulting parties based upon the results of use estimation; and
- (c) Construction Implementation Schedule– scheduling, planning, and construction for any new or enhanced facilities.

**8.1.1 Use Estimation**

The Form 80, a standard compliance requirement, provides information regarding the number of recreational facilities located within the project boundary of licensed hydroelectric projects, total annual recreation days within the project, and at what capacity project recreation facilities are being used. This information can then be used by the Power Authority and the consulting parties to determine whether the project recreational needs are being met by the current recreation facilities or if additional recreation facilities are needed.

In addition to conducting the typical Form 80 evaluations to estimate use, the Power Authority will conduct additional recreation facility capacity investigations as part of its 12-year evaluation program.

The information from the typical Form 80 evaluations will be analyzed and used to calculate the average percentage of capacity used. Facilities that may require additional public access will be defined as those facilities that are being consistently used at 100% capacity or greater. Facilities that

**NIAGARA POWER PROJECT (FERC NO. 2216)**  
**RECREATION PLAN**

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are being used at 100% or higher capacity for limited periods during the year, or only during expected high peak times of use such as summer holidays, will not be considered as being over capacity.

Every other Form 80 year, the capacity study will be expanded to include user counts and observations of recreational activity. This will allow the licensee to gain a better understanding of what activities the recreating community is participating in, and allow for more informed discussions when determining if and what type of additional recreation facilities may be needed.

The Power Authority will prepare a report once every twelve years that contains the findings and results of the Form 80 evaluations and the facility capacity study. This report will be submitted to the consulting parties for review as part of consultation.

**8.1.2 Consultation**

Once the report is complete, the Power Authority will distribute a consultation package to the USFWS; NPS; DEC; OPRHP; the Tuscarora Nation; BIA; and the NREC (consultation parties) for a 30-day review. The information package will contain the Recreation Plan, any addendums to the Plan, the results of the facility capacity study, the previous two Form 80 submissions, and the most recent update of the NY Statewide Comprehensive Outdoor Recreation Plan (SCORP). The goal of this review will be to determine whether the recreation needs of the public participating in activities within the project boundary are being met.

The Power Authority will conduct a meeting with the consultation parties near the completion of the 30-day review. Topics of discussion for the meeting will include: perceived project recreation needs and the ability of project facilities to serve the current recreation activities of the public.

**8.1.3 Construction Schedule**

Addendums to the Recreation Plan, and schedules for development of new recreation facilities, if needed, will be based on the changing recreation needs of the public over the life of the license. If there is a need for additional or enhanced facilities, a tentative schedule for construction will be developed with the consulting parties. If this schedule for new or enhanced facilities has the potential to impact schedules/budgets that are already in place, the Power Authority will meet with the consulting parties as necessary to discuss revising the construction/implementation schedules. Additionally, construction/implementation schedules may need to be revised based on the amount of time needed to adopt acceptable budgets and available assistance from the managing agencies.

**NIAGARA POWER PROJECT (FERC NO. 2216)**  
**RECREATION PLAN**

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**9.0 MEASURES TO REDUCE TRESPASS ON TUSCARORA NATION LANDS**

Article 404 of the new license, requires the Power Authority to include a discussion of reasonable and prudent measures, developed in consultation with the Tuscarora Nation, to reduce and prevent, as practicable as possible, trespass on Nation lands by users of the project's recreational facilities. The Tuscarora Nation is adjacent to the Project with Nation lands immediately east and north of the Lewiston Reservoir. A portion of their land extends into the Project boundary, and the Power Authority holds an easement on these Nation lands within the Project boundary.

The Nation reports that fishermen and other recreationalists park their cars alongside Garlow Road on Nation Lands to access Lewiston Reservoir. To address this license requirement, therefore, the Power Authority and the Tuscarora Nation have agreed to work cooperatively to install signs along Garlow Road to discourage trespass on Nation lands. In addition to the placement of signage to discourage trespass, the Power Authority will work with the Tuscarora Nation to place additional signs directing fisherman and other recreationalists to park at designated facilities for Lewiston Reservoir access.

**NIAGARA POWER PROJECT (FERC NO. 2216)  
RECREATION PLAN**

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**10.0 BIBLIOGRAPHY**

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KA2005b, Recreation Needs Assessment

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KA2004, Recreation Facility Inventory and Assessment Update

NYSCORP2003, Final New York Statewide Comprehensive Outdoor Recreation Plan (<http://gse-share01:83/Project%20References/Lists/Project%20References/Attachments/366/1019215281.pdf>)